STOEL RIVES LLP
ATTORNEYS AT LAW

500 Capitol Mall, Suite 1600
Sacramento, CA 95814
main 916.447.0700
fax 916.447.4781
www.stoel.com

KRISTEN T. CASTAÑOS
Direct (916) 319-4674
ktcastanos@stoel.com

January 30, 2013

VIA HAND DELIVERY

Ms. Patricia Kelly, Siting Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Redondo Beach Energy Center Project (12-AFC-03)
Data Adequacy Supplement

Dear Ms. Kelly:

On behalf of AES Southland Development, LLC ("AES-SD"), enclosed herewith please find supplemental information related to the Application for Certification for the Redondo Beach Energy Project ("RBEP"). Specifically, enclosed are 10 paper copies and 20 disks containing information needed for purposes of attaining data adequacy. In addition, certain Cultural Resources information is being submitted concurrently herewith under confidential designation. Pursuant to California Code of Regulations, section 2505, the requisite application was previously submitted to the Executive Director on November 20, 2012, which was granted on December 12, 2012. Finally, enclosed please find AES-SD's letter of attestation regarding the supplemental data provided herein.

Should you have any questions concerning this submittal, please do not hesitate to contact Sarah Madams at (916) 286-0249 or me at (916) 319-4674.

Very truly yours,

Kristen T. Castaños

KTC:jmw
Enclosures

AES
we are the energy

AES Southland Development
690 North Studebaker Road
Long Beach, CA 90803
tel 562 493 7736
fax 562 493 7320

January 25, 2013

Mr. Robert Oglesby, Executive Director
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: Redondo Beach Energy Project (12-AFC-03) Data Adequacy Supplement

Dear Mr. Oglesby:

AES Southland Development, LLC ("AES-SD") herein submits its Data Adequacy Supplement for the Redondo Beach Energy Project Application for Certification. In accordance with the provisions of Title 20, California Code of Regulations, section 1707, AES-SD attests to the truth and accuracy of the information contained in the Data Adequacy Supplement.

AES-SD looks forward to working with you and your staff to make this a successful project for all. Should you have any questions or concerns regarding this application, please contact Stephen O'Kane at (562) 493-7840.

Sincerely,

Jennifer Didlo
President
AES Southland Development, LLC

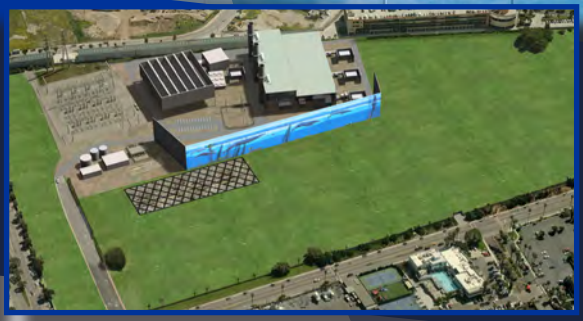
cc: Stephen O'Kane, AES Southland, LLC
Sarah Madams, CH2M Hill, Inc.
Kristen T. Castaños, Stoel Rives LLP

Data Adequacy Supplement

Application for Certification

Redondo Beach Energy Project

January 2013



Submitted by

AES

the power of being global

With Technical Assistance from

CH2MHILL®

IS120911143723SAC

Data Adequacy Supplement

In support of the

Application for Certification

for the

Redondo Beach Energy Project (12-AFC-03)

Submitted to:

California Energy Commission

Submitted by:

AES Southland Development, LLC

With Technical Assistance by:

CH2MHILL

Sacramento, California

January 30, 2013

Contents

1.0 Introduction

This Supplement to AES Southland Development, LLC's (AES-SLD) Application for Certification (AFC) for the Redondo Beach Energy Project (RBEP) (12-AFC-03) provides information in response to comments that California Energy Commission (CEC) Staff made as a result of their data adequacy review of the AFC. The intention of this Supplement is to provide the additional information necessary for Staff to find that the AFC contains adequate data to begin a power plant site certification proceeding under Title 20 of the California Code of Regulations and the Warren-Alquist Energy Resources Conservation and Development Act.

The format for this Supplement follows the order of the AFC and provides additional information and responses to CEC Staff's information requests for several disciplines. Only sections for which CEC Staff posed requests or questions related to data adequacy are addressed in this Supplement. If the response calls for additional appended material, it is included at the end of each subsection. Appended material is identified by the prefix "DA" indicating an item submitted in response to a Staff Data Adequacy comment, a number referring to the applicable AFC chapter, and a sequential identifying number. For example, the attachment in response to a Transmission System Engineering comment would be Attachment DA3.0-1, because the AFC section describing electrical transmission is Section 3.0. Tables are also numbered in this way. Appended material is paginated separately from the remainder of the document.

Each subsection contains data adequacy comments or information requests, with numbers and summary titles and, in parentheses, the citation from Appendix B (Information Requirements for an Application) of Title 20, California Code of Regulations indicating a particular information requirement for the AFC. Each item follows with the CEC Staff comment on data adequacy for this item, under the heading "Information required to make AFC conform with regulations" followed by AES-SLD's response to the information request and the information requested.

5.1 Air Quality

1. Compliance Determination (Appendix B (g)(8)(A))

The information necessary for the air pollution control district where the project is located to complete a Determination of Compliance.

Information required to make the AFC conform with regulations:

Provide the permit application completeness letter from the South Coast Air Quality Management District.

Response: The South Coast Air Quality Management District (District) has requested additional information necessary for the air permit application to be deemed complete. A letter containing said information was submitted to the District on January 11, 2013, a copy of which was docketed with the CEC on January 16, 2013. Applicant will transmit a copy of the District's completeness letter to the CEC upon receipt from the District.

5.2 Biological Resources

2. Impacts to Jurisdictional or Non-jurisdictional Wetlands (Appendix B (g)(13)(D)(iii)

If the project or any related facilities could impact a jurisdictional or non-jurisdictional wetland, provide completed Army Corps of Engineers wetland delineation forms and/or determination of wetland status pursuant to Coastal Act requirements, name(s) and qualifications of biologist(s) completing the delineation, the results of the delineation and a table showing wetland acreage amounts to be impacted.

Information required to make the AFC conform with regulations:

For the three onsite retention ponds (identified as freshwater ponds) and any other depressional areas holding water on figures 5.2-2b and 5.2-2c, please provide USACE wetland delineation forms and a table showing the potential wetland acreage. Please also indicate the wetland acreage that may meet wetland status pursuant to Coastal Act requirements.

Response:

Upon further review of the project site and in conversations with both the U.S. Army Corps of Engineers (USACE) and the California Coastal Commission (CCC), the Applicant has determined that additional LORS discussing wetlands and the Coastal Act should be provided. In addition, Figures 5.2-2bR and 5.2-2cR have been revised to identify USACE and CCC potential jurisdictional wetlands onsite. Completed USACE wetland delineation forms are provided in Attachment DA5.2-1. Final determination of wetland presence on the RBEP site will depend on jurisdictional determination to be completed by the USACE and the CCC.

Federal LORS (Section 5.2.6.1) :

Federal Clean Water Act. The Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board.

State LORS (Section 5.2.6.2) :

California Coastal Act defines the "coastal zone" as the area of the state which extends three miles seaward and generally about 1,000 yards inland. In developed urban areas, the coastal zone extends substantially less than 1,000 yards inland. Almost all development within the coastal zone, which contains many wetlands, requires a coastal development permit from either the CCC or a local government with a certified Local Coastal Program.[1] The California Coastal Act defines wetlands as, "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens" (Public Resources Code Section 30121).

[1] Under the authority of the Warren-Alquist Act, the California Energy Commission has the sole authority to license thermal power plants with a rating of greater than 50 megawatts including those located within a coastal zone. The Coastal Commission participates in the CEC's proceeding to define measures necessary to ensure conformance with the Coastal Act and local coastal plan.

Table 5.2-1 Revisions:

Table 5.2-1 has been revised to include the Federal Clean Water Act and the California Coastal Act provisions pertaining to coastal wetlands and is provided as Table DA 5.2-1.

TABLE DA 5.2-1
Laws, Ordinances, Regulations, and Standards for Biological Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
Federal Clean Water Act	Regulates the discharge of dredged or fill material into "waters of the United States" including wetlands	USACE	RBEP is not likely to affect any wetlands as defined by the USACE because treatment systems designed to meet requirements of the Clean Water Act are not waters of the United States or lack significant nexus to navigable waters of the US (Section 5.2.6.1).
State			
California Coastal Act	Regulates development within the coastal zone through issuance of a Coastal Development permit that ensures consistency with the California Coastal Act requirements regarding minimizing and/or mitigating adverse impacts on identified environmentally sensitive habitats and wetland areas.	CCC	RBEP may affect potential jurisdictional wetlands as defined by the California Coastal Act. CCC verification of wetland jurisdiction under the California Coastal Act is pending (Section 5.2.6.2).

3. Effects of Facility Closure on Biological Resources (Appendix B (g)(13)(E)(i)

…all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure.

Information required to make the AFC conform with regulations:

Potential direct, indirect, cumulative impacts during construction, demolition, and operation have been identified; however, closure impacts have not been discussed. Please provide a discussion of the effects of facility closure on biological resources.

Response: As described in Section 2.0, Project Description, facility closure can be temporary or permanent. Temporary closure is defined as a shutdown for a period exceeding the time required for normal maintenance, including closure for overhaul or replacement of the combustion turbines. Causes for temporary closure include a disruption in the supply of natural gas or damage to the plant from earthquake, fire, storm, or other natural acts. Permanent closure is defined as a cessation in operations with no intent to restart operations because of plant age, damage to the plant beyond repair, economic conditions, or other reasons.

Potential Impacts of a Temporary Closure on Biological Resources

Temporary closure activities that do not involve release of hazardous material will follow a contingency plan for temporary cessation of operations. The contingency plan will include the notification of the CEC and other appropriate responsible agencies and ensure conformance with all applicable LORS. If the temporary closure also involves the release of hazardous materials into the environment, procedures set forth in a Risk Management Plan and a Hazardous Materials Business Plan will be implemented. Procedures will include methods to control releases, notify appropriate agencies, including those specifically responsible for the protection of biological resources, as well as training for plant personnel in responding to and controlling release of hazardous materials.

Based on the foregoing, including implementation of the Plans discussed above, activities associated with the temporary closure of the facility will have a less than significant impact on biological resources.

Potential Impacts of a Permanent Closure on Biological Resources

To ensure that biological resources are protected during the decommissioning of the facility, a decommissioning plan would be submitted to the CEC for approval prior to decommissioning. The plan would describe the decommissioning activities for the facility and for all appurtenant facilities constructed as part of the facility; conformance of the proposed decommissioning activities to all applicable LORS and local/regional plans; activities necessary to restore the site if the plan requires removal of all equipment and appurtenant facilities; decommissioning alternatives other than complete restoration; associated costs of the proposed decommissioning, and the source of funds to pay for the decommissioning.

As part of the permanent closure of RBEP, all equipment containing chemicals will be drained and shut down to protect the environment and biological resources. All nonhazardous wastes will be collected and disposed of in appropriate landfills or waste collection facilities in compliance with applicable LORS. Similarly, all hazardous wastes will be disposed of according to all applicable LORS.

As set forth above, activities associated with the permanent closure of the facility will have a less than significant impact on biological resources.

4. Preliminary Record of Correspondence (Appendix B (g)(13)(H)

Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWCB) will be required for the proposed project.

Information required to make the AFC conform with regulations:

Please provide a preliminary record of correspondence with the applicable USACE office on the need for a formal wetland delineation or wetland determination for the project. Please provide a preliminary record of correspondence with the applicable California Coastal Commission office on the occurrence of coastal wetlands within the site.

Response:

Copies of the US Army Corps of Engineers (USACE) wetland delineation forms and cover letter will be provided to the USACE Los Angeles District in late January/ early February 2013 and docketed with the CEC. The California Coastal Commission (CCC) and the California Department of Fish and Wildlife (CDFW) will be copied on this letter.

Representatives from the USACE and the CCC were contacted by telephone in January 2013. Records of Conversation between the Applicant's consultant and both the USACE and the CCC are provided as Attachment DA5.2-2. In addition, a revised agency contact list for biological resources is presented in Table DA5.2-2.

TABLE DA5.2-2
Agency Contacts for Biological Resources

Issue	Agency	Persons Contacted
Wetlands and Waters of the US	US Army Corps of Engineers Los Angeles District	Daniel Swanson Environmental Scientist U.S. Army Corps of Engineers Los Angeles District Regulatory Division 915 Wilshire Blvd. Los Angeles, CA 90017 (213) 452-3408 Daniel.D.Swanson@usace.army.mil
Coastal Wetlands	California Coastal Commission	Tom Luster Staff Environmental Scientist Energy, Ocean Resources and Federal Consistency Division 45 Fremont, Suite 2000 San Francisco, CA 94105 (415)-904-5248 tluster@coastal.ca.gov

Legend

- AES Redondo Beach Energy Project
- 250-Foot Buffer

NWI Wetland Type

- Estuarine and Marine Wetland
- Freshwater Pond

Potential Jurisdictional Wetlands

- Potential CCC Wetlands
- Potential USACE Wetlands

Source: FWS (2012), CH2MHill (2013).

Note: NWI data is accurate to produce
medium resolution information at a scale of 1:12,000.
Larger scales will not contain the same level of accuracy.

0 200 400
Feet

N

FIGURE 5.2-2bR
Potential Wetlands in Immediate Vicinity of Project Site (1:2400 scale)
AES Redondo Beach Energy Project
Redondo Beach, California

Legend

- AES Redondo Beach Energy Project
- 250-Foot Buffer

NWI Wetland Type

- Estuarine and Marine Wetland
- Freshwater Pond

Potential Jurisdictional Wetlands

- Potential CCC Wetlands
- Potential USACE Wetlands

Source: FWS (2012), CH2MHill (2013).

Note: NWI data is accurate to produce medium resolution information at a scale of 1:12,000. Larger scales will not contain the same level of accuracy.

0 200 400
Feet

N

FIGURE 5.2-2cR
Potential Wetlands in Immediate Vicinity of Project Site (1:2400 scale)
AES Redondo Beach Energy Project
Redondo Beach, California

CH2MHILL

\\ZION\SACGIS\PROJ\AES\MAPFILES\REDONDO_BEACH\BIOLOGY\REDONDO_WETLANDS_C.MXD KMINO 1/29/2013 10:01:06 AM

Attachment DA5.2-1
US Army Corps of Engineers
Wetland Delineation Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-01

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): ~30

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 09.67" N | Long: -118° 23' 40.69" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: Freshwater pond (PUBKx)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Lined retention basin (location - 01)

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation is present.

SOIL

Sampling Point: SP-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
N/A								See remarks below.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: The retention basin is lined and soil samples cannot be obtained.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): 8-10"
Water Table Present?	Yes ○	No ○	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches): N/A

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water is present from stormwater. The retention basin is lined so the water table and saturation cannot be observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project City/County: Redondo Beach/Los Angeles Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development State: CA Sampling Point: SP-02

Investigator(s): M. Fowler Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) Local relief (concave, convex, none): Concave Slope (%): ~30

Subregion (LRR): C - Mediterranean California Lat: 33° 51' 11.37" N Long: -118° 23' 36.14" W Datum: WGS84

Soil Map Unit Name: Chino silt loam NWI classification: Freshwater pond (PUBK)

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Lined retention basin (location - 02).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation is present within the lined retention basin.

SOIL

Sampling Point: SP-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
N/A								See remarks below.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No soil is present because the retention basin is lined.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): ~2-4"
Water Table Present?	Yes ○	No ○	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches): N/A

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water is present from stormwater. The retention basin is lined so the water table and saturation cannot be observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-03

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 06.31" N | Long: -118° 23' 35.46" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 04W).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Agrostis gigantea*	45	Yes	FACW
2. *Cyperus difformis*	7	No	OBL
3. *Sonchus oleraceus*	5	No	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	57 %		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 43 % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	7	x 1 =	7
FACW species	45	x 2 =	90
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	57 (A)		122 (B)

Prevalence Index = B/A = 2.14

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: SP-03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	10 YR 3/2	100					Sand	Saturation present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Entire site is located on artificial fill. No organic content was present. However, the soil is saturated and may be considered an artificial hydric soil. Soils meets criteria 3 for hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches):

Water Table Present? Yes ◉ No ○ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation is present and soil pit immediately filled with water after the soil sample was removed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project City/County: Redondo Beach/Los Angeles Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development State: CA Sampling Point: SP-04

Investigator(s): M. Fowler Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): C - Mediterranean California Lat: 33° 51' 06.45" N Long: -118° 23' 36.42" W Datum: WGS84

Soil Map Unit Name: Chino silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 04U).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation is present in the upland location. Vegetation may not be able to become established in the compacted fill and previous industrial use.

SOIL

Sampling Point: SP-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-10	10 YR 3/2	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: The entire site has been covered in artificial fill. No field indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ◉	No ○	Depth (inches): 10"
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): > 1"

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project City/County: Redondo Beach/Los Angeles Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development State: CA Sampling Point: SP-05

Investigator(s): M. Fowler Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) Local relief (concave, convex, none): Concave Slope (%): ~30

Subregion (LRR): C - Mediterranean California Lat: 33° 51' 06.31" N Long: -118° 23' 35.46" W Datum: WGS84

Soil Map Unit Name: Chino silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (•) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (•)	
Hydric Soil Present?	Yes ( )	No (•)	**Is the Sampled Area within a Wetland?** Yes ( ) No (•)
Wetland Hydrology Present?	Yes (•)	No ( )	

Remarks: Fuel oil tank containment basin (location - 06).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (•)

Remarks: No vegetation is present.

SOIL

Sampling Point: SP-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
N/A								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Lined retention basin, not able to obtain a soil sample.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): > 12"
Water Table Present?	Yes ○	No ◉	Depth (inches): N/A
Saturation Present? (includes capillary fringe)	Yes ○	No ◉	Depth (inches): N/A

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-06

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 05.05" N | Long: -118° 23' 38.23" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Stormwater drainage, concrete banks.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Agrostis gigantea*	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	15 %		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 5 % | % Cover of Biotic Crust 80 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	15	x 2 =	30
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	15 (A)		30 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks: Remaining cover is rocks placed on top of soils with biotic crust.

SOIL

Sampling Point: SP-06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-3		100					Rocks	Rock fill placed in drain
3-12	10 YR 4/3	100					Sand	Saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: The entire site is located on artificial fill. No indicators were present within the soil. However, the soil is saturated and may be considered an artificial hydric soil. The soil meets criteria 3 and meets the definition of a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): > 3"

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation is present below the rock layer.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-07

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 03.27" N | Long: -118° 23' 35.65" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 05U).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: Vegetation growth may be restricted from past industrial uses, potentially problematic.

SOIL

Sampling Point: SP-07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-4	10 YR 2/2	100					Sand	
4-8	10 YR 4/3	100					Sand	Saturated
8-12	10 YR 4/2	100					Sand	Saturated & high water table
								Bottom of pit

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Soil is saturated at 4". The entire site is located on artificial fill.; however, the soil is saturated and may be considered an artificial hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ◉	No ○	Depth (inches): 12"
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): 8"

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-08

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 50' 56.95" N | Long: -118° 23' 34.59" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 08).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Sonchus oleraceus*	12	Yes	UPL
2. *Agrostis gigantea*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	17 %		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 83 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	5	x 2 =	10
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	12	x 5 =	60
Column Totals:	17 (A)		70 (B)

Prevalence Index = B/A = 4.12

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: SP-08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-3	10 YR 3/2	100					Sand	Saturation present
3-12	10 YR 4/3	95						
	10 YR 2/1	5						Oil residue

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: The entire site is located on artificial fill. The soil is saturated and may be considered an artificial hydric soil. The soil meets criteria 3 and meets the definition of a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ◉ No ○ Depth (inches): >8"

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water is present at 8" below the surface in the soil pit.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-09

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 100.12" N | Long: -118° 23' 35.79" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 07U).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation is present.

SOIL

Sampling Point: SP-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-2	10 YR 3/1	100					Sand	
2-2.5	10 YR 2/1	100					Sand	Oil stain
2.5-5	10 YR 3/2	100					Sand	
5-8	5 YR 2.5/1	100					Sand	Oil smell
								Bottom of pit

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Fuel oil residue in bottom of the soil pit at 8", aromatic scent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0-8"

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation/moistness is present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-10

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 51' 00.92" N | Long: -118° 23' 34.30" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Fuel oil tank containment basin (location - 07W).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Sonchus oleraceus*	45	Yes	UPL
2. *Agrostis gigantea*	8	No	FACW
3. *Trifolium sp.*	5	No	
4.			
5.			
6.			
7.			
8.			
Total Cover:	58 %		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	8	x 2 =	16
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	53 (A)		241 (B)

Prevalence Index = B/A = 4.55

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: The clover was not identifiable to species.

SOIL

Sampling Point: SP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-8	10 YR 3/2	100					Sand	Saturated
								Bottom of pit

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Soils are saturated, may be artificial hydric soil. Ponded water is present and most likely meets criteria 3.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches):

Water Table Present? Yes ◉ No ○ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-11

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 50' 56.50" N | Long: -118° 23' 33.77" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks: Fuel oil tank containment basin (location - 09).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation was present.

SOIL

Sampling Point: SP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-5	10 YR 4/4	80					Sand	Slight moisture present
		20					Rock	
								Shovel refusal

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Unable to dig past 5".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Redondo Beach Energy Project | City/County: Redondo Beach/Los Angeles | Sampling Date: 9 Jan. 2013

Applicant/Owner: AES Southland Development | State: CA | Sampling Point: SP-12

Investigator(s): M. Fowler | Section, Township, Range: T4S, R15W, S01; T4S, R14W, S06; T4S, R14W

Landform (hillslope, terrace, etc.): Terrace (coastal) | Local relief (concave, convex, none): Concave | Slope (%): 0

Subregion (LRR): C - Mediterranean California | Lat: 33° 50' 59.96" N | Long: -118° 23' 35.63" W | Datum: WGS84

Soil Map Unit Name: Chino silt loam | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [X] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks: Fuel oil tank containment basin (location - 08).

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1. *N/A*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	(A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks: No vegetation was present.

SOIL

Sampling Point: SP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-2	10 YR 2/1	100					Loamy sand	
2-8	10 YR 3/1	100					Loamy sand	
								Shovel refusal

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Unable to dig past 8". Some discoloration may be present from oil residue.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Some moistness present from recent rainfall.

Legend

- Wetland Delineation - Sample Locations
- Constructed Pit - 0.08 Acres
- Former Tank 1 - 0.431 Acres
- Former Tank 2 - 0.202 Acres
- Former Tank 3 - 0.066 Acres

0 250 500 Feet

N

Attachment DA5.2-2
Records of Conversation

CH2MHILL® TELEPHONE CONVERSATION RECORD

Call To: Daniel Swenson, USACE Regulatory

Phone No.: 213.452.3414 **Date:** 1/16/2013

Call From: Rene Langis, CH2M HILL **Time:** 3:00 PM

Message Taken By:

Subject: Need for a formal wetland delineation on the RBEP site

Project No.: 424103.01.07.RB

Mr. Swenson responded to the message Rene Langis left on 1/10/2013 for the USACE Los Angeles District Regulatory Branch. The purpose of the call was to discuss the need for a formal wetland delineation on the RBEP site, in response the CEC a data adequacy request. R. Langis briefly described the potential wetlands located on the site, including the results from the wetland determination data forms completed by CH2M HILL biologist Melissa Fowler on 1/9/2013. R. Langis also described the industrial use of the potential wetland areas and the absence of a direct hydrological connection to a navigable water of the US. Mr. Swenson responded that he needed a written request for a Jurisdictional Determination (JD) before he can determine if the described wetlands are indeed jurisdictional under the USACE regulations. R. Langis responded that request for a JD will be submitted in the following weeks.

CH2MHILL® TELEPHONE CONVERSATION RECORD

Call To: Tom Luster, California Coastal Commission

Phone No.: 415.904.5248 **Date:** 1/24/2013

Call From: Rene Langis, CH2M HILL **Time:** 3:00 PM

Message Taken By:

Subject: Occurrence of coastal wetland on the RBEP Site

Project No.: 424103.01.07.RB

R. Langis called Mr. Luster, Staff Environmental Scientist at the Energy, Ocean Resources and Federal Consistency Division of the California Coastal Commission. The purpose of the call was to discuss the potential occurrence of wetlands as defined under the California Coastal Act in response the CEC a data adequacy request. R. Langis briefly described the potential wetlands located on the site, including the results from the USACE wetland determination data forms completed by CH2M HILL biologist Melissa Fowler on 1/9/2013. R. Langis also described the industrial use of the potential wetland areas and the fact that these wetland features have developed in man-made structures. Mr. Luster mentioned that although the USACE requires that all 3 wetland parameters be met, under the Coastal Act, only one wetland parameter is sufficient but that the "wetland" also needs to be providing wetland functions and values. He added that we should send him a copy of the wetland determination data forms by email and that he would consult with the CCC Ventura Office biologist, Dr. Jonna Engel to decide if a site visit is be necessary. R. Langis responded that he will email him the forms.

5.3 Cultural Resources

5. Literature Searches (Appendix B (g)(2)(B)

The results of a literature search to identify cultural resources within an area not less than a 1-mile radius around the project site and not less that than one-quarter (0.25) mile on each side of the linear facilities. Identify any cultural resources listed pursuant to ordinance by a city or county, or recognized by any local historical or archaeological society or museum.

Literature searches to identify the above cultural resources must be completed by, or under the direction of, individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.

Copies of California Department of Parks and Recreation (DPR) 523 forms (Title 14 CCR §4853) shall be provided for all cultural resources (ethnographic, architectural, historical, and archaeological) identified in the literature search as being 45 years or older or of exceptional importance as defined in the National Register Bulletin Guidelines (36 CFR 60.4(g)).

A copy of the USGS 7.5' quadrangle map of the literature search area delineating the areas of all past surveys and noting the California Historical Resources Information System (CHRIS) identifying number shall be provided.

Copies also shall be provided of all technical reports whose survey coverage is wholly or partly within .25 mile of the area surveyed for the project under Section (g)(2)(C), or which report on any archaeological excavations or architectural surveys within the literature search area.

Information required to make the AFC conform with regulations:

1. *Applicant does not appear to have consulted the listing of locally registered cultural resources on web pages for the City of Hermosa Beach. According to AFC figures 5.3-1 and 5.3-1b, the City of Hermosa Beach is in the architectural survey area. The City has two web pages devoted to historical resources: http://www.hermosabch.org/modules/showdocument.aspx?documentid=1351 and http://www.hermosabch.org/modules/showdocument.aspx?documentid=794. Please consult these web pages and provide a discussion of any listed cultural resources that fall within the literature review area.*

Response: A search of the City of Hermosa Beach websites listed in Staff's request was performed on January 18, 2013. Additionally, the City was contacted by telephone on January 22, 2013. The following information was obtained primarily from the recommended website. City staff confirmed that the information found on their website is the most current they have. Using the Staff-recommended websites, the following Hermosa Beach local landmarks were identified within the literature search buffer area:

Metropolitan/Bijou Theater—1229-38 Hermosa Avenue, Hermosa Beach, CA. Hermosa Beach designated local landmark. Built in 1923 as the Metropolitan Theater, this was a first-run theater that also housed a bank, store, offices, and Masonic lodge rooms. It was built by the First Bank of Hermosa Beach; the architect was a local resident, R.D. King, with engineering by the Los Angeles Engineering Company. It was later known as the Strand and then the Bijou. One of the oldest remaining buildings in Hermosa Beach, it has been preserved but no longer serves as a movie theater (Gazin, 2013).

Pier Avenue School/Hermosa Beach Community Center—See the summary of site record P-19-186751 below.

Bank of America Building—90 Pier Avenue, Hermosa Beach, CA. Hermosa Beach designated local landmark. This is notable as one of the oldest commercial structures in downtown Hermosa Beach.

Hermosa Hotel—20-26 Pier Avenue, Hermosa Beach, CA. Hermosa Beach designated local landmark. This is the oldest hotel building in downtown Hermosa Beach, constructed before World War I.

The designated landmarks are:

- The Bijou Theater at 1229-1235 Hermosa Avenue is a local landmark.
- The Bank of America Building at 90 Pier Avenue and Hermosa Hotel at 20-26 Pier Avenue are designated as potential landmarks that warrant further study by Section 17.53.040(B) of the Historic Preservation ordinance (per Planning Commission Resolution No. 98-65).
- The Hermosa Beach Community Center (also known as the former Pier Avenue School) at 710 Pier Avenue was designated a locally significant landmark for the purposes of a grant application (City Council Resolution 02-6216).

In 1994, as part of their Land Use Plan, the City recommended 28 structures as potential locally significant resources (including the four designated landmarks listed above). Of these 28 structures, 19 are within the project study area, but only the 4 listed above are designated as historic properties, and thus only those 4 are subject to the requirements of the ordinance. None of these 19 properties are located within the architectural survey area or within the project area.

References:

City of Hermosa Beach. 2013. Chapter 17.53 Historic Resources Preservation. Available online at: http://www.hermosabch.org/index.aspx?page=462. Accessed January 21, 2013.

Gazin, Patricia A. 2013. History of the Bijou Theater. Available online at: http://www.hermosabeachhistoricalsociety.org/bijouhist.html. Accessed January 21, 2013.

2. *Section 5.3 and Appendix 5.3B do not discuss six cultural resources that are located in the records search area. Please provide descriptions of P-19-186751, P-19-177599, P-19-177668, P-19-177541, P-19-177600, and P-19-177601.*

Response: The following architectural resources were identified within the literature search area but are not located in the architectural survey area:

P-19-177541—Diamond Apartments, 321 Diamond Street, Redondo Beach, CA. Listed in the NRHP 1992 under Criterion A. Assessor's Parcel 7505-301-1

The Diamond Apartments is a two-story building in the Classical Revival style, dating from 1913. It has commercial storefronts on the first floor and residential units on the second floor. It is considered significant as “a rare representative of the early commercial life of Redondo Beach…. The Diamond Apartment building is the second oldest commercial building in town and the oldest such building that retains integrity” (Dyan, 1991).

P-19-177599—Sweetser Residence, 417 E. Beryl Street, Redondo Beach, CA. Listed in the NRHP 1985 under Criterion D.

The Sweetser residence and its outbuildings date from 1921 and form a “classic American Colonial Revival complex” (McAvoy, 1984). “As the foremost example of Colonial Revival residential architecture in Redondo Beach, the Sweetser residence is a visual reminder of a significant period of development in this City's history, a period of residential growth which changed this beach city from a resort to a year-round community”(McAvoy, 1984).

P-19-177600—Woman’s Club of Redondo Beach, 400 South Broadway, Redondo Beach, CA. Listed in the NRHP 1984 under Criteria A and C.

Built in 1922, the Woman’s Club of Redondo Beach is significant for “its continuous association with the development and welfare of the Redondo Beach community…This redwood board and batten structure is an excellent example of the vernacular Bungalow tradition once popular in Southern California coastal communities and is one of the few remaining historic structures in the original Redondo Beach townsite… the Woman's Club has remained continuously without interruption as a club for women, which still serves its original purposes: philanthropy, civic and educational betterment” (Loranger, 1983).

P-19-177601—Redondo Beach Public Library, 309 Esplanade, Redondo Beach, CA. Listed in the NRHP 1981 under Criteria A and C.

The Redondo Beach Public Library, located in Veterans Park, was built in 1930 in the Spanish Colonial Revival style with some elements of the Dutch Colonial style. It was designed by architect Lovell Bearse Pemberton (Strojny and Anderson, 1980). It is significant for its architecture and also for its association with the City's early history.

P-19-177668—Cheetham House, 625 Diamond Street, Redondo Beach, CA.

This is a single family residence from 1912. It is described as a Vernacular Cottage, and had a garage addition in 1971. It has been heavily altered. When surveyed in 2003, it was recommended as not contributing to the surrounding historic district.

P-19-186751—Pier Avenue School/Hermosa Beach Community Center, 710 Pier Avenue, Hermosa Beach, CA. Hermosa Beach designated local landmark.

The original school building on this site was built in 1911, but severely damaged by an earthquake in 1933. Afterwards, it was substantially rebuilt by the Works Progress Administration (The Living New Deal, 2012). It received additions in 1936 and 1939 (Donnelly, 2002). It housed Pier Avenue Junior High until the school closed in 1975. The city purchased the building in 1976 and remodeled it into a theater space and community center. A survey in 2002 determined the building not eligible for the NRHP (Donnelly, 2002).

References:

City of Hermosa Beach. 2013. Chapter 17.53 Historic Resources Preservation. Available online at: http://www.hermosabch.org/index.aspx?page=462. Accessed January 21, 2013.

City of Hermosa Beach Historic Resources. 2009. Source: Hermosa Beach General Plan as of February 2009. Available online at: http://www.hermosabch.org/modules/showdocument.aspx?documentid=794. Accessed January 21, 2013.

Donnelly, Amy. 2002. State of California, Department of Parks and Recreation – Primary Record – Hermosa Beach Community Center - 19-186751. August 1, 2002.

Dyan, Sandra. 1991. National Register of Historic Places Registration Form – Diamond Apartments. July 10, 1991.

Loranger, Joyce. 1983. National Register of Historic Places Inventory-Nomination Form – Woman's Club of Redondo Beach. May 31, 1983.

McAvoy, Christie Johnson. 1984. National Register of Historic Places Inventory-Nomination Form – Sweetser Residence. June 25, 1984.

McKenna, Jeannette A. 2003. State of California, Department of Parks and Recreation – Primary Record – 625 Diamond, Redondo Beach - 19-177668.

Strojny, Bernard M. and Victoria A. Anderson. 1980. National Register of Historic Places Inventory-Nomination Form – Redondo Beach Public Library. February 13, 1980.

The Living New Deal. 2012. Hermosa Beach Community Center/Pier Avenue Junior High – Hermosa Beach CA. Department of Geography, University of California, Berkeley. Available online at: http://livingnewdeal.berkeley.edu/projects/hermosa-beach-community-centerpier-avenue-junior-high-hermosa-beach-ca/. Accessed January 17, 2013.

3. *Appendix 5.3C lacks DPR forms for P-19-186751. Please provide these forms.*

Response: The forms for this resource are provided in Attachment DA5.3-1.

4. *DPR 523 form for RBGS, surveyed in 2011 and referenced in Section 5.3.4.3, p. 29, is not included with the AFC Appendix 5.3B. Please provide the form(s).*

Response: The forms for this resource are provided in Attachment DA5.3-1.

5. *Reports for three architectural surveys in the records search area (Table 5.3-E) are not contained in Appendix 5.3C. Please provide copies of these reports: LA-6206, LA-6990, and LA-10068.*

Response: The three architectural survey reports LA-6206, LA-6990, and LA-10068 are provided in Attachment DA5.3-1.

6. Summary of Local Paleoenvironments (Appendix B (g)(2)(C))

The results of new surveys or surveys less than 5 years old shall be provided if survey records of the area potentially affected by the project are more than five (5) years old. Surveys to identify new cultural resources must be completed by (or under the direction of) individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.

New pedestrian archaeological surveys shall be conducted inclusive of the project site and project linear facility routes, extending to no less than 200' around the project site, substations and staging areas, and to no less than 50' to either side of the right-of-way of project linear facility routes. New historic architecture field surveys in rural areas shall be conducted inclusive of the project site and the project linear facility routes, extending no less than .5 mile out from the proposed plant site and from the routes of all above-ground linear facilities. New historic architecture field surveys in urban and suburban areas shall be conducted inclusive of the project site, extending no less than one parcel's distance from all proposed plant site boundaries. New historic architecture field reconnaissance ("windshield survey") in urban and suburban areas shall be conducted along the routes of all linear facilities to identify, inventory, and characterize structures and districts that appear to be older than 45 years or that are exceptionally significant, whatever their age.

A technical report of the results of the new surveys, conforming to the Archaeological Resource Management Report (ARMR) format (CA Office of Historic Preservation Feb 1990), which is incorporated by reference, shall be separately provided and submitted (under confidential cover if archaeological site locations are included)

Information required to make the AFC conform with regulations:

Page 4 of the ARMR requires "a discussion of both the natural and cultural environments in which archaeological resources were created and <u>used</u>" (emphasis added). Section 2.1 of Appendix 5.3B provides information on the present-day biota, geology, and climate of the project vicinity. Pages 2-2 and 2-3 of Appendix 5.3B state that some archaeological sites excavated at Redondo and Hermosa beaches are more than 5,000 years old. Paleoclimatic and archaeological research on the southern California coast indicates that significant environmental changes occurred over the last 5,000 years, including landform changes that would affect how the archaeological record formed and the marine resources available to human groups. These are critical issues for explaining the presence or absence of archaeological resources in the project area. Please provide a summary of local paleoenvironments minimally for the last 5,000 years and implications for the formation of the archaeological record, per the ARMR requirements. Key sources to consider include "Nineteenth Century Coastal Geomorphology of Southern California" in Journal of Coastal Research 22(4):847–861 and Chapter 2 of California Prehistory: Colonization, Culture, and Complexity.

Response: At the start of the Holocene and during the earliest known occupations of the southern California coast, the coastline looked very different than it does today. Seas were lower and the coastline extended out a few miles further than now. The off-coast islands were also larger and a few more spits of land were extant. Many of the embayments found along the coast today did not exist at the start of the Holocene. Many of the bays that dot the California coastline in the present did not exist either. San Pedro Bay, for example, the closest bay to the RBEP, did not exist near the start of the Holocene. Land extended to within 15 miles of Santa Catalina Island, rather than the 26 to 32 miles of today (Porcasi et al., 1999). The project site would have been located much farther from the sea at that time than today, both to the east and the south.

California's seasonal wet and dry periods, winters with most of the rain logged during the year and dry, hot, mostly rainless summers, appears to have been a pattern which occurred throughout the Holocene (West et al., 2007). But, the overall climate of the southern California coastline has changed throughout the Holocene, exhibiting periods with radical differences in temperature and precipitation. Evidence indicates that some of these swings were not only quick, but also involved more dramatic drought or flood events than those recorded in the

modern era (Boxt et al., 1999). Pollen analysis from sites along the San Diego coastline, approximately 80 miles south of RBEP, indicate that the early Holocene exhibited frequent and heavy coastal fog, the middle Holocene was characterized by a stable and mild climate, and the late Holocene climate varied widely. Yearly El Niño conditions with heavy winter rains and warmer temperatures traded with years of drought in this later period (West et al., 2007). Pollen analysis of samples taken from the San Joaquin Marsh near Newport Bay, Orange County, approximately 30 miles south of the RBEP site, exhibit indications of extreme drought identified inland between 900 and 1300 AD. Although located well outside of the project site, these findings have implications for the entire coastline. The drought, which lasted centuries, is associated with, as likely a driver for, changes in settlement patterns, subsistence strategies, trade networks, etc. throughout California. The pollen analyses conducted at San Joaquin Marsh also revealed a period of increased freshwater runoff around 1600 AD, at the start of the Little Ice Age. This period of increased precipitation influenced yet another round of cultural changes and adaptations (Boxt et al., 1999). These changes between drought and increased precipitation would have affected deposition at the project site as well. Periods of high run-off would result in more rapid deposition of sediment, particularly in areas near where streams or rivers emptied into the ocean, while periods of drought would result in more stable and less frequent depositional activities.

In addition to the climate changes, surface sea temperatures also appeared to have fluctuated on a millennial period, from cold to warm waters. Surface temperatures in the Early and Middle Holocene were more stable than those from the Late Holocene (West et al., 2007). Changes in the surface temperatures of the sea would have affected local sea life and the different resources available to human settlements near the ocean.

Specific written records and accounts of climate change for southern California are not readily available until the mid to late 1800s. During the latter half of the nineteenth century, southern California was rapidly settled and by the start of the twentieth century looked very different than it had in a more natural state in the early 1800s. Differences in pre-settled coastal California weather indicated that winter winds were stronger and storm waves were larger and more ferocious than at present. Erosion from these large waves along the shore was more extreme than now. Southeasters, storms likened by nineteenth century sailors to hurricanes, decreased in frequency as the nineteenth century came to a close and the Little Ice Age ended (Engstrom, 2006).

At the start of the Holocene, the familiar plant communities of southern California—chaparral, oak woodland, and coastal sage scrub—rapidly increased throughout the region (West et al., 2007). These communities grew and replaced the pines, which the pollen record show inhabited the now pine-less areas of southern California at the Pleistocene-Holocene transition. The pollen record at Daisy Cave on San Miguel Island shows the presence of pine trees on the island at the start of the Holocene. There are no pine trees on San Miguel Island now (West et al., 2007). Many of the observed landforms along the shoreline in southern California in the nineteenth century consisted of low hillock dunes, generally less than 5 feet in height, which ran along the beaches. Vegetation generally consisted of red sand verbena and occasional salt bush and silver beach weed. Generally, written historical accounts agree that shellfish was very abundant, more so than at present, along the shore at this time. Estuaries were common on the land side of the small barrier spits along the coasts. Salt marshes and grass covered areas surrounded these estuaries (Engstrom, 2006).

As late as the mid 1800s, estuaries along the coast connected to the ocean via inlets. These inlets could be seasonal. In winter, they would be open and useable, frequently due to rain, while in summer heavy waves would create dams, which blocked ocean access. Heavy deposition of sediment during winter could also block inlet access. Once access was blocked, the evaporation of the water would result in alkali flats and high salinity in the water (Engstrom, 2006). The RBEP site, located at the edge of a historic Salt Lake, was likely one area of this kind of depositional activity and it is quite possible that the original formation of this salt lake was very much as described above.

References:

Boxt, Matthew A., L. Mark Raab, Owen K. Davis, and Kevin O. Pope. 1999. Extreme Late Holocene Climate Change in Coastal Southern California. Pacific Coast Archaeological Society Quarterly: 35(2&3): 25-36

Engstrom, W.N. 2006. Nineteenth Century Coastal Geomorphology of Southern California. *Journal of Coastal Research*: 22 (4): 847-861

Porcasi, Paul, Judith F. Porcasi, and Collin O'Neill. 1999. Early Holocene Coastlines of the California Bight: The Channel Islands as First Visited by Humans. *Pacific Coast Archaeological Society Quarterly:* 35 (2&3): 1-24

West, James G., Wallace Woolfenden, James A. Wanket, and R. Scott Anderson. 2007. Late Pleistocene and Holocene Environments. In *California Prehistory: Colonization, Culture and Complexity*. Eds. Terry L. Jones and Kathryn A. Klar. pp. 11-34.

7. Literature Searches (Appendix B (g)(2)(C)(i)

The summary from Appendix B (g)(2)(A) and the literature search results from Appendix B (g)(2)(B);

Information required to make the AFC conform with regulations:

1. *Applicant does not appear to have consulted the listing of locally registered cultural resources on web pages for the City of Hermosa Beach. According to AFC figures 5.3-1 and 5.3-1b, the City of Hermosa Beach is in the architectural survey area. The City has two web pages devoted to historical resources: http://www.hermosabch.org/modules/showdocument.aspx?documentid=1351 and http://www.hermosabch.org/modules/showdocument.aspx?documentid=794. Please consult these web pages and provide a discussion of any listed cultural resources that fall within the literature review area.*

Response: Please see the response to Data Adequacy # 5, question #1, above.

2. *Section 5.3 and Appendix 5.3B do not discuss six cultural resources that are located in the records search area. Please provide descriptions of P-19-186751, P-19-177599, P-19-177668, P-19-177541, P-19-177600, and P-19-177601.*

Response: Please see the summaries for site records P-19-186751, P-19-177599, P-19-177668, P-19-177541, P-19-177600, and P-19-177601 set forth in response to Data Adequacy # 5, question #3, above.

3. *Appendix 5.3C lacks DPR forms for P-19-186751. Please provide these forms.*

Response: The forms for this resource are provided in Attachment DA5.3-1.

4. *Reports for three architectural surveys in the records search area are not contained in Appendix 5.3C. Please provide copies of these reports: LA-6206, LA-6990, and LA-10068.*

Response: The reports for these architectural surveys are provided in Attachment DA5.3-1.

8. DPR 523 Detail Form for the RBGS/1100 North Harbor Boulevard Historic District (Appendix B (g)(2)(C)(iii)

Copies of all new and updated DPR 523(A) forms. If a cultural resource may be impacted by the project, also include the appropriate DPR 523 detail form for each such resource;

Information required to make the AFC conform with regulations:

The appendix is missing DPR 523 forms for the RBGS/1100 North Harbor Boulevard historic district.

Response: The forms for this resource are provided in Attachment DA5.3-1.

9. Figure that Depicts the Locations of all Previously Known and Newly Identified Cultural Resources (Appendix B (g)(2)(C)(iv)

A map at a scale of 1:24,000 U.S. Geological Survey quadrangle depicting the locations of all previously known and newly identified cultural resources compiled through the research required by Appendix B (g)(2)(B) and Appendix B (g)(2)(C) (ii); and

Information required to make the AFC conform with regulations:

Appendix 5.3E should include wharves #2 and 3 from Study LA-004171, attachment 3, map 1. These are historic pilings still visible at low tide, and represent a potential resource type. Provide a single figure that depicts the locations of all previously known and newly identified cultural resources.

Response: An updated map showing the historic resources is included as Confidential Attachment DA5.3-2.

10. Project Map(s) Sent to the NAHC and Native Americans (Appendix B (g)(2)(D)

Provide a copy of your request to the Native American Heritage Commission (NAHC) for information on Native American sacred sites and lists of Native Americans interested in the project vicinity, and copies of any correspondence received from the NAHC. Notify the Native Americans on the NAHC list about the project, including a project description and map. Provide a copy of all correspondence sent to Native American individuals and groups listed by the NAHC and copies of all responses.

Provide a written summary of any oral responses.

Information required to make the AFC conform with regulations:

The correspondence appendix does not include copies of the project map(s) sent to the NAHC and Native Americans. Please provide a copy of any maps sent.

Response: A map was sent with both the NAHC request and with letters sent to Native Americans contacted for this project. This map is included with this submittal as Attachment DA5.3-3.

11. LORS Information for the City of Hermosa Beach and the California Coastal Commission (Appendix B (i)(1)(A)

Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and

Information required to make the AFC conform with regulations:

1. *A portion of the architectural survey area is in the City of Hermosa Beach, but any LORS from this municipality are not discussed in AFC Section 5.3.8. Please provide information on these LORS.*

Response: **City of Hermosa Beach LORS**
City of Hermosa Beach Municipal Code, Chapter 17.53 “Historic Resources Preservation” (Ord. 98-1186 §4, 11/10/98), is known as the “Hermosa Beach Preservation Ordinance.” Established in 1998, it allows for the designation of local landmarks and requires that “to be eligible for consideration as a landmark, an historic resource must be at least 50 years old; with the exception that an historic resource of at least 30 years old may be eligible if the Council determines that the resource is exceptional, or that it is threatened by demolition, removal, relocation, or inappropriate alteration.” The ordinance requires that a Certificate of Appropriateness be obtained before any work can occur to a designated landmark.

Reference:

City of Hermosa Beach. 2013. Chapter 17.53 Historic Resources Preservation. Available online at: http://www.hermosabch.org/index.aspx?page=462. Accessed January 21, 2013.

2. *The proposed project area is in the Coastal Zone, as defined by the California Coastal Commission. Table 5.3-3 of the AFC does not identify the Coastal Commission as an agency with State LORS affecting cultural resources. The Coastal Commission has a particular role in siting cases before the Energy Commission. As such, any Coastal Commission LORS must be identified in the AFC. This link is a starting point for identifying Coastal Commission LORS: http://www.coastal.ca.gov/coastact.pdf.*

Response: The applicant has initiated contact with CCC staff. Additional discussion regarding the California Coastal Act as it applies to the RBEP and LORS applicable to the RBEP are described further in both Data Adequacy Response 12, as well as Section 5.6.2.5.2, Table 5.6-4, and Section 5.6.6.2.2 of the AFC.

12. LORS Information for the City of Hermosa Beach and the California Coastal Commission (Appendix B (i)(1)(B)

Tables which identify each agency with jurisdiction to issue applicable permits, leases, and approvals or to enforce identified laws, regulations, standards, and adopted local, regional, state and federal land use plans, and agencies which would have permit approval or enforcement authority, but for the exclusive authority of the commission to certify sites and related facilities.

Information required to make the AFC conform with regulations:

Provide LORS information for the City of Hermosa Beach and the California Coastal Commission.

Response: The Applicant inadvertently omitted both the Hermosa Beach LORS and CCC LORS. A brief discussion of each is as follows:

City of Hermosa Beach LORS

City of Hermosa Beach Municipal Code, Chapter 17.53 "Historic Resources Preservation" (Ord. 98-1186 §4, 11/10/98), is known as the "Hermosa Beach Preservation Ordinance." Established in 1998, it allows for the designation of local landmarks and requires that "to be eligible for consideration as a landmark, an historic resource must be at least 50 years old; with the exception that an historic resource of at least 30 years old may be eligible if the Council determines that the resource is exceptional, or that it is threatened by demolition, removal, relocation, or inappropriate alteration." The ordinance requires that a Certificate of Appropriateness be obtained before any work can occur to a designated landmark.

California Coastal Commission LORS

The California Coastal Act Section 30244 applies to this project. This section states:

> Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

If the State Historic Preservation Officer were to determine that the RBEP would adversely impact archaeological resources, reasonable mitigation measures would be implemented. Table DA5.3-1 identifies these additional LORS.

TABLE DA5.3-1
Laws, Ordinances, Regulations, and Standards for Cultural Resources

LORS	Requirements/Applicability	Administering Agency	AFC Section Explaining Conformance
State			
Coastal Act Section 30244	Mitigate impacts to archaeological resources	CCC	Section 5.3.8.2
Local			
City of Hermosa Beach Municipal Code, Chapter 17.53 "Historic Resources Preservation"	Allows for designation of local landmarks.	CEC	Section 5.3.8.3

Additional discussion regarding the CCC as it applies to the RBEP and LORS applicable to the RBEP are described further in Section 5.6.2.5.2, Table 5.6-4, and Section 5.6.6.2.2 of the AFC.

13. Contact Information for the United States Environmental Protection Agency, the City of Hermosa Beach and the Coastal Commission (Appendix B (i)(2)

The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.

Information required to make the AFC conform with regulations:

Add contact information for the United States Environmental Protection Agency, the City of Hermosa Beach and the Coastal Commission.

Response: The Prevention of Significant Deterioration (PSD) permitting program requires the administering agency to determine if the project complies with other federal acts, including the ESA and Antiquities Act. On January 10, 2013, the EPA delegated PSD responsibility for the RBEP to the SCAQMD and therefore the appropriate contact is the South Coast Air Quality Management District.

The contact for the SCAQMD is Andrew Lee, South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765, (909) 396-2643.

Contacts for the SCAQMD, City of Hermosa Beach, and the CCC are listed in Table DA5.3-2

TABLE DA5.3-2
Additional Agency Contacts for Cultural Resources

Issue	Agency	Persons Contacted
Prevention of Significant Deterioration (PSD) Permitting Program	South Coast Air Quality Management District	Andrew Lee SCAQMD 21865 Copley Drive Diamond Bar, CA 91765 (909) 396-2643
Planning & Land Use	City of Hermosa Beach, Community Development Department, Planning Division	Aaron Gudelj, Planning Staff 1315 Valley Drive Hermosa Beach, CA 90254 (310) 318-0242 agudelj@hermosabch.org
Coastal Land Uses	California Coastal Commission	Tom Luster Staff Environmental Scientist Energy, Ocean Resources and Federal Consistency Division 45 Fremont, Suite 2000 San Francisco, CA 94105 (415)-904-5248 tluster@coastal.ca.gov

Attachment DA 5.3-1
Site Summaries and DPR Forms

19-186751

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # 1365666
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 2 *Resource Name or #: (Assigned by recorder) Hermosa Beach Community Center

P1. Other Identifier: formerly Pier Avenue Junior High School
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad *Redondo Beach* Date 1963 (1981) T 3 S; R 14 W; unsectioned ; S.B. B.M.
5c. Address 710 Pier Ave. City Hermosa Beach Zip 90254
d. UTM: (Give more than one for large and/or linear resources) Zone 11 ; 371175 mE / 3747780 mN (NAD 27)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

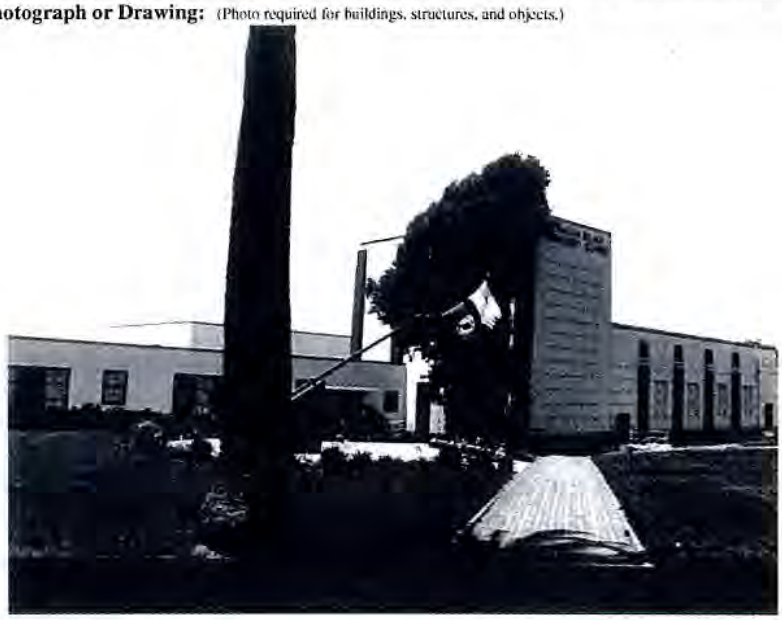
*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This is a Modernistic/Art Deco building built in an irregular compound plan with nine units. The different units have one and two stories. They form two "L" compound plans. Notable features include the asymmetrical facade, flat roof, and stepped forms. The walls are covered with stucco. The upper levels show smooth wall surface finishing, and the lower level has unfinished concrete walls. There are horizontal grooves on several of the facade walls of the building. On the north and east facade, several evenly spaced grooves extend the width of the facade. On the south wing, seven evenly spaced grooves are placed between the windows. The northeast corner unit, which houses an auditorium/theater, has a number of blind windows with geometrically decorated grilles. Decorative buttresses on the facade are also significant Art Deco character defining features. Each buttress and some walls on the facade have geometrical and stylized motifs. There are several windows of different type and size. The north unit has three-sash windows with a central louver. The south unit has four-over-four double hung paired windows and four-over-four double hung ribbon windows. There are some recessed entrances, and some are covered by screens. There are two exterior staircases; one at the west end of each wing.

The building stands on the northeast side of the property. It is landscaped by several palms and a lawn front on the north and east sides. To the west and south are parking lots, tennis and basketball courts, and a skate park. This building does not appear to meet the criteria for nomination to the National Register of Historic Places. Although, as Pier Avenue Junior High, it was the site of the first official skateboarding competition, it cannot be said to be connected to events important in national history. Its Art Deco elements make it typical of 1930s architecture, but it does not make a distinct contribution to that tradition, and the building is unlikely to contribute information to history.

*P3b. Resource Attributes: (List attributes and codes) HP15 Educational building, HP12 Civic Auditorium, HP13 Community Center
*P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing: (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, data, accession #) View to the northwest

*P6. Date Constructed/Age and Sources:
☒ Historic ☐ Prehistoric ☐ Both
1911; rebuilt 1933; additions 1936 and 1939. Sources: Sanborn maps, Hermosa Beach City Clerk, Hermosa Beach Historical Society

*P7. Owner and Address:
City of Hermosa Beach
1315 Valley Drive
Hermosa Beach, California 90254

*P8. Recorded by: (Name, affiliation, and address): Amy Donnelly, Research Director, Cultural Resource Management, LLC
Pomona, California 91711

*P9. Date recorded: 8/1/02

*P10. Survey Type: (Describe)
Intensive Survey

*P11. Report citation: (Cite survey report and other sources or enter "none.") Cultural Resources Assessment for AT&T Wireless Services Facility No. D158D, Los Angeles County, California, September 2002

Attachments: None ☒Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List) _____

DPR 523A (1/95) ***Required Information**

19-186751

State of California - Resource Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI #
Trinomial

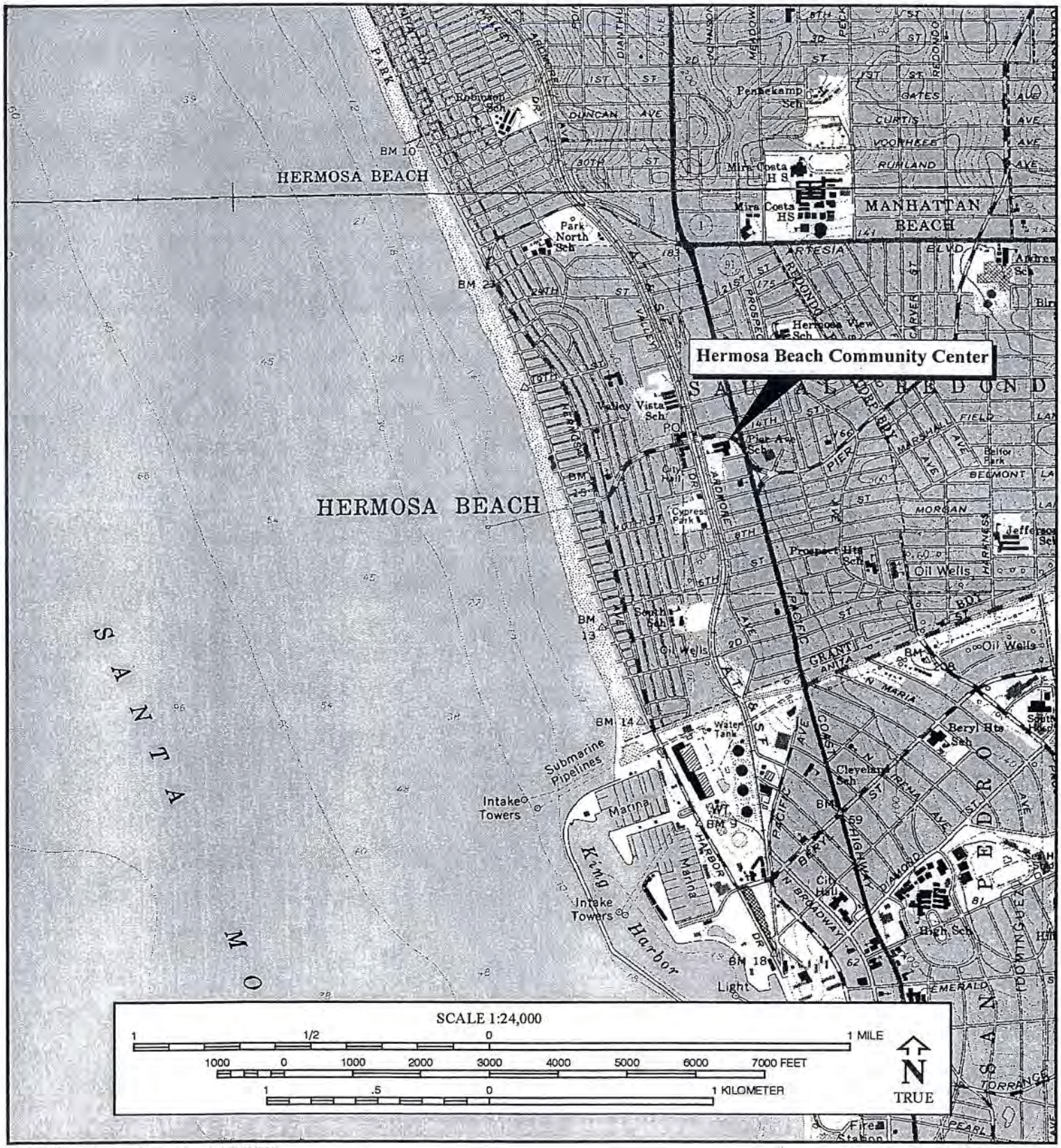
Page 2 of 2

*Resource Name or # (Assigned by recorder) Hermosa Beach Community Center

*Map Name: USGS 7.5' Quad, REDONDO BEACH, California

*Scale: 1:2400

*Date of Map: 1965 (photorevised 1981)



i:\gti130\gis\dprmaps\hermosa.mxd (9/6/02)

* Required Information

AN EVALUATION OF THE RESIDENTIAL STRUCTURE LOCATED AT 625 DIAMOND STREET, REDONDO BEACH, LOS ANGELES COUNTY, CALIFORNIA

Pg: 53
Ty: (14) Histo[ric] Evaluati[on]
Ac: Stor-
Sites: Øsite ØHB
Dev: (3) Con[struction] (23) Remedia[tion]
Quad: 903
REDONDO BEACH

* House in historic residential district

Prepared for:

Alex Yushenko
c/o Robert Treman Architecture
Attn: Robert Treman
2100 N. Sepulveda Blvd., Suite 11
Manhattan Beach, California 90266

Prepared by:

McKENNA et al.
6008 Friends Avenue
Whittier, California 90601-3724
(562) 696-3852
(562) 693-4059 FAX

Author and Principal Investigator: Jeanette A. McKenna, MA, RPA

Job No. 02-03-02-715
February 17, 2003

AN EVALUATION OF THE RESIDENTIAL STRUCTURE LOCATED AT 625 DIAMOND STREET, REDONDO BEACH, LOS ANGELES COUNTY, CALIFORNIA

by,

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

INTRODUCTION

McKenna et al. initiated this evaluation of the property located at 625 Diamond Street in the City of Redondo Beach at the request of Robert Treman of Robert Treman Architecture, Manhattan Beach, California. Mr. Treman represents the current property owner, Alex Yushenko. Mr. Yushenko was required to complete this evaluation as part of the process for obtaining a demolition permit from the City of Redondo Beach. Mr. Yushenko proposes to redevelop the property by removing the existing residence and erecting a condominium complex within the existing historic district. McKenna et al. initiated and completed these studies in February of 2003.

LOCATION AND SETTING

The Alex Yushenko property is located at 625 Diamond Street, City of Redondo Beach, Los Angeles County, California (Figure 1). This property is cross-referenced as Assessor Parcel No. 7503-026-028 (Figure 2) and within Township 4 South, Range 14 West, Section 6 (Figure 3). This property is within the boundaries of the original Townsite of Redondo Beach and is bounded by Guadalupe Avenue and Diamond Street. Gertruda Avenue is located to the southwest by one lot. The historic Redondo beach High School is located across Diamond Street. Within the historic residential district, this property is cross-referenced as No. 44, No. 28346, and No. 277-124-67.

The property identified as 625 Diamond Street has been developed as a single family residence on the eastern boundary of a residential street. Over the years, some single family residences within this area have been removed and/or replaced by multi-family residential complexes. In this particular case, the property is within an area still reflecting the original development of the residential district, but has been altered.

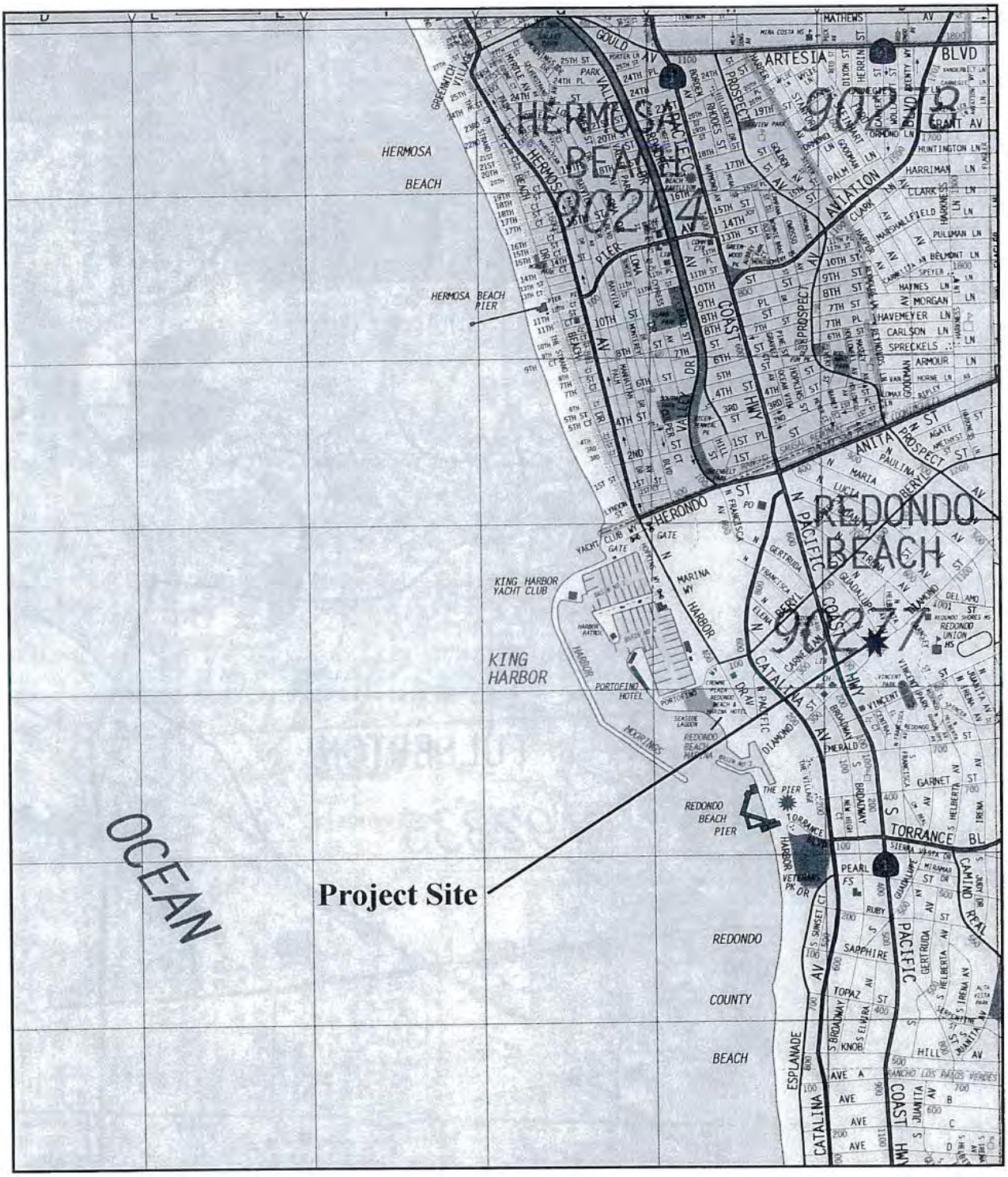


Figure 1. General Location of the Project Area.

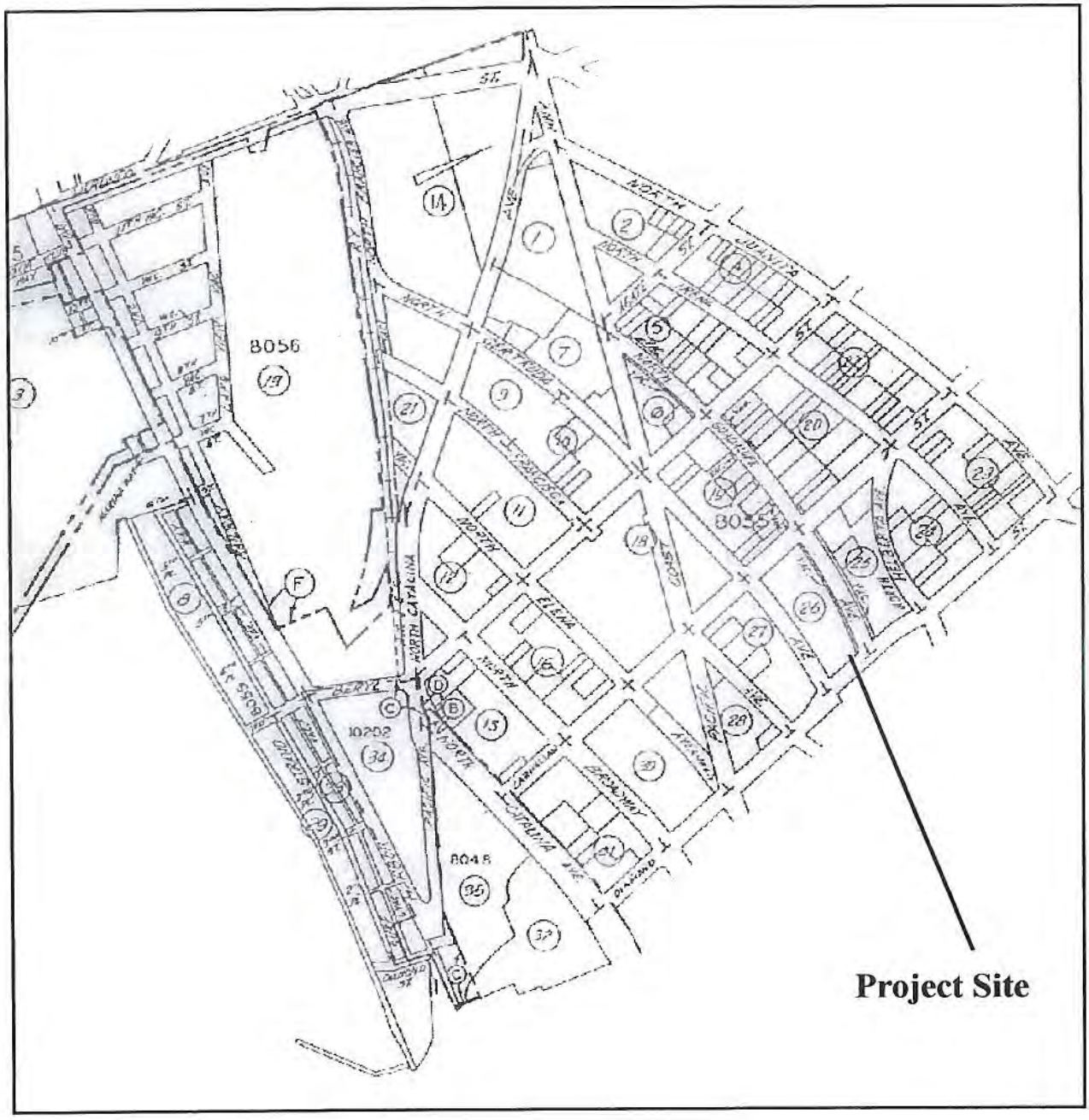


Figure 2. Assessor Parcel Book 7503, Redondo Beach.

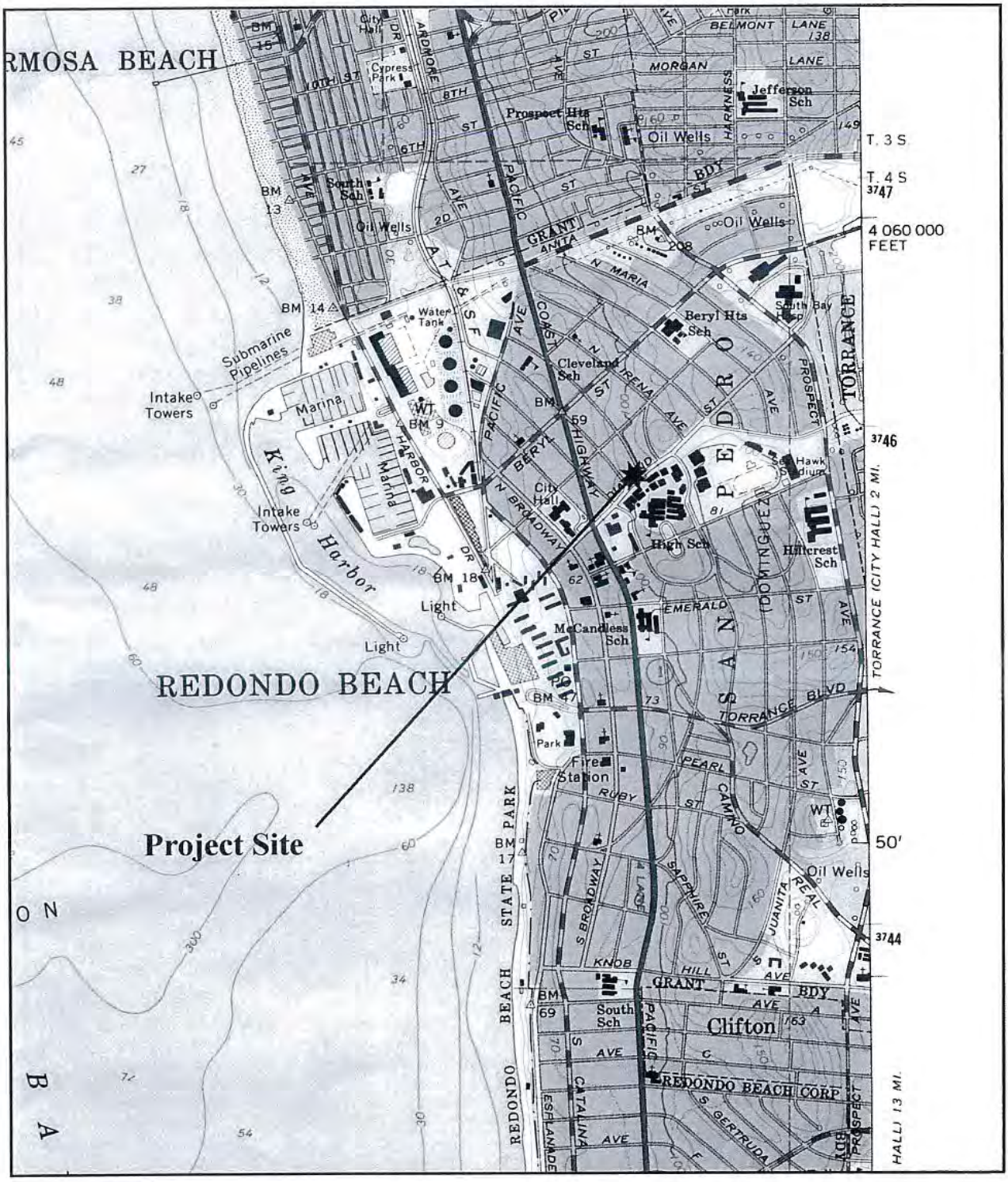


Figure 3. Specific Location of the Project Area (USGS Redondo Beach Quadrangle).

The historic residential district defined for this area is bounded by Guadalupe Avenue, Diamond Street, Carnelian Street, and the structures on the south side of Gertruda Avenue. Overall, there are fifty structures within these blocks, but only 44 have been included in the district. Six structures in the center of Guadalupe Avenue were not included as part of the district because they are inconsistent with the historic character of the area.

625 DIAMOND STREET - CURRENT CONDITIONS

According to City/County records, the residence at 625 Diamond Street was constructed in 1912. At the time of its development, the area was developed as a single family residential community with the high school eventually being developed across Diamond Street. Prior to the development of the high school, similar single family residences were constructed across Diamond Street. The "footprint" for 625 Diamond Street is illustrated on various Sanborn Maps (including 1916 and 1946, respectively).

The 1912 Sanborn Map illustrates the property, but not the structure, as the structure was not completed at the time of the mapping (Figures 4, 5 and 6). First appearing on the maps in 1916, the structure is a simple, almost square residence with a small front porch facing Diamond Street (see Figure 5). The yard area is located to the north and there is no evidence of a garage. By 1946, the Sanborn Maps illustrate the original structure and a detached garage to the north (Figure 6). The present-day garage is attached to the residential structure (see Appendix B).

The Sanborn maps identified the property as consisting of a single story residence (dwelling) with an squared floor plan and an open porch spanning approximately one half of the residence's main elevation. The identification as a "dwelling" is indicative of a wood framed structure and the "dot" designation is indicative of a composition roof. The property is accessed from Diamond Street via a driveway and walkway across a relatively wide city-owned easement. The utility pole is actually located quite close to the residence and well away from the existing curb.

Data provided by the City of Redondo Beach Department of Planning confirmed that this residence was constructed in 1912 (Permit 438; 5-1-12) by owner C.R. Cheetham. No permit was recorded for the addition of the original garage. Likewise, no demolition permit was available for the removal of the original garage. The existing garage was constructed in 1971 (Permit No. 42729; 7-16-71) by owner Jay Steger. Adjoining the residence, the new garage was described as a 22 by 22 foot structure. In 1996, Steger re-roofed the structure (Permit No. B961473). Visual inspection of the property in February of 2003 resulted in the identification of significant alterations to the exterior of the structure - including the complete re-siding of the building and the porch (see Appendix B).

The occupational history of this structure was reconstructed from various sources, including City records and the directories for the years between 1912 and 2000. These resources showed that the original owner/builder was C.R. Cheetham (1912). Following the construction, the occupants included:

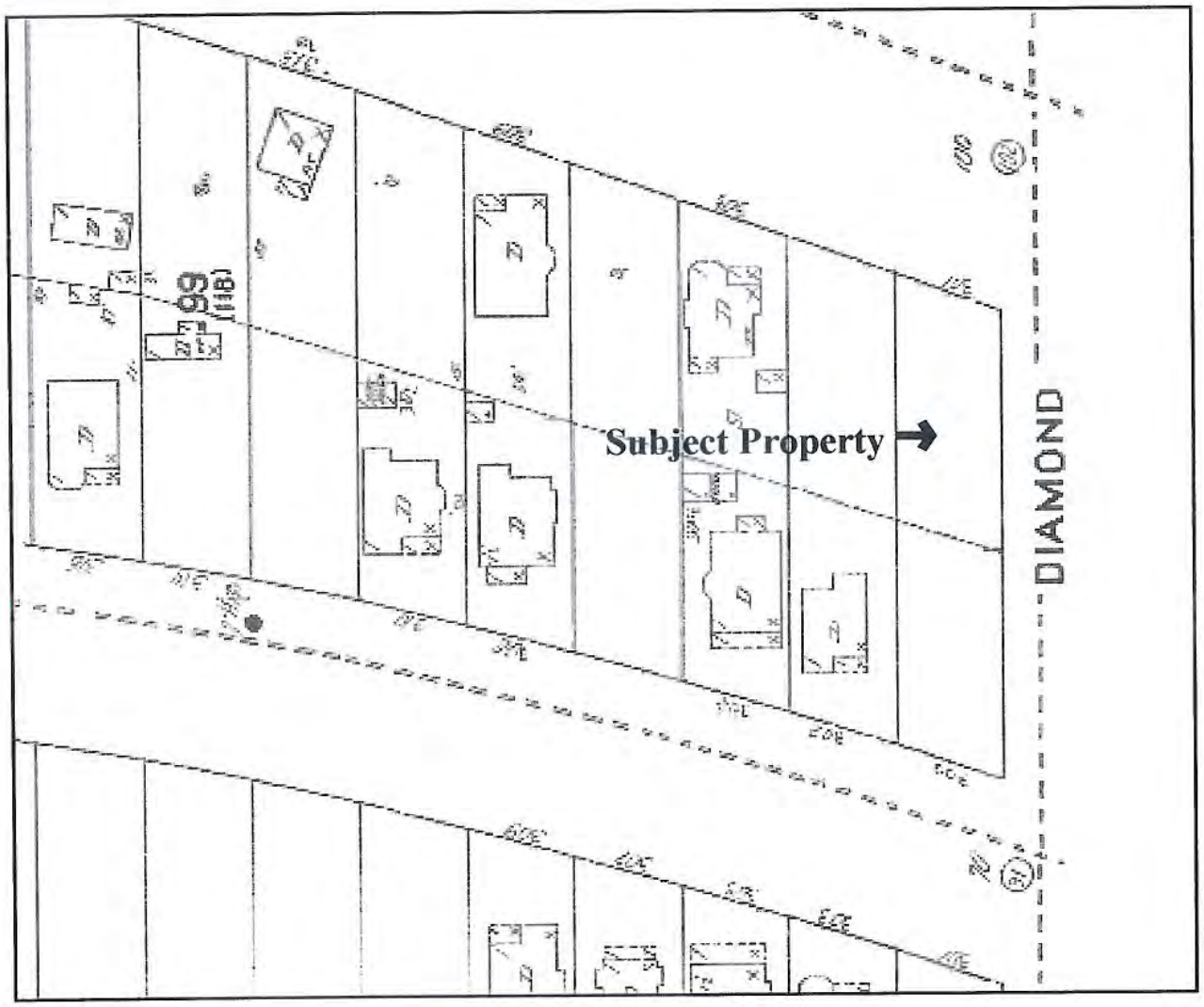


Figure 4. Sanborn Map of 1912 (Note: the Property is Undeveloped).

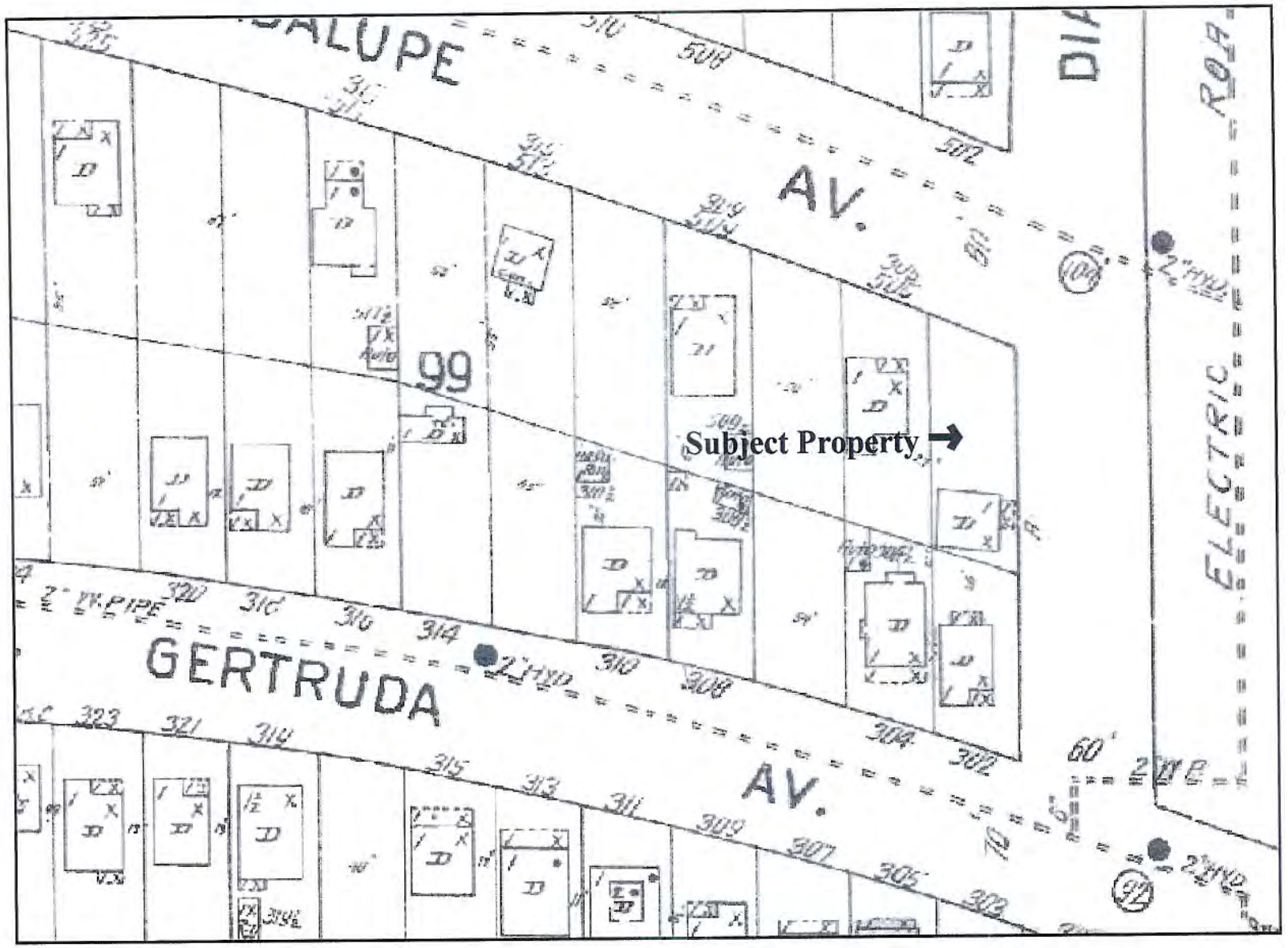


Figure 5. Sanborn Map of 1916 (Note: the Property is Developed, but No Garage).

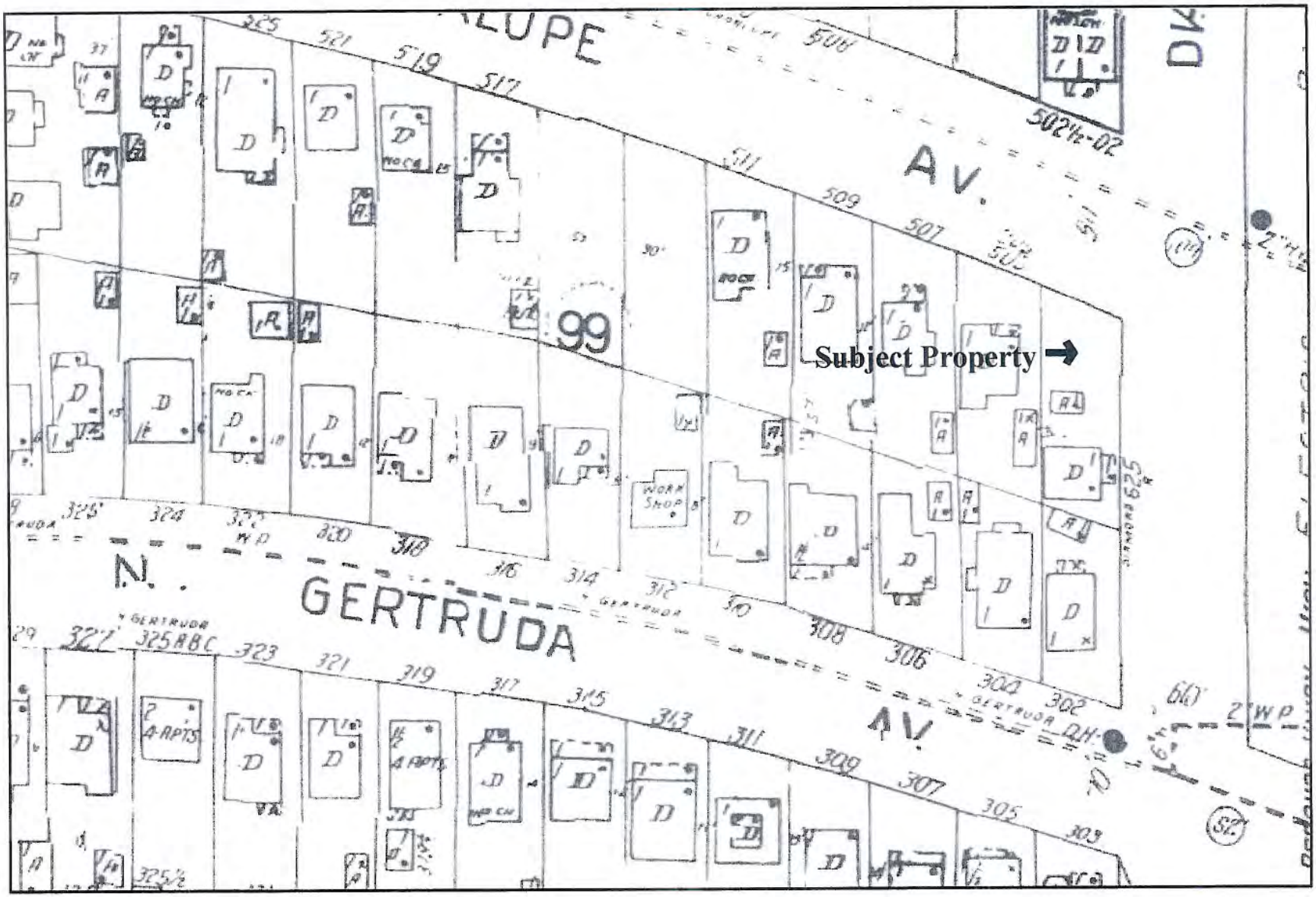


Figure 6. Sanborn Map of 1946 (Note: the Property is Developed, Garage is Detached).

1912	Residence Constructed by C.R. Cheetham
1913-1914	Samuel Devlin (Union Tank Line Agent)
	(Cheetham, Carpenter, living on N. Juanita 1913-14)
1915-1916	Samuel Devlin listed at 515 N. Gertruda; No Listing for Diamond St.
1923-1924	E.G. and Anna Blatter (Gardner at High School)
1925-1926	John M. (Janitor) and Annie Tower
1927-1931	J.M. Tower (Janitor) and J.M. Tower, Jr. (Gardner)
1936	Joseph D. and Lula A. Getter (Salesman)
1947-1952	Harry E. and Marjorie Owens (Custodian, Public Schools; first phone)
1971-1997	Jay Steger(Eleanor Steger in 1978; Bldg. Permit for Garage 1971; Roof 1996)
1998	Jamee Palmer
1999	Jay Steger
2000	Jamee Palmer

The garage that appears on the 1946 Sanborn Map was likely constructed in the 1930s, when the Getter family occupied the house. Economically, the Getters were more likely to own a car than the Towers or Owens families.

The residence at 625 Diamond Street was described in the National Register of Historic Places application for the Redondo Beach historic residential district as a single family, single story building with a "medium gable roof." The application also identifies the structure as a non-contributing element of the district because:

> "The original siding was removed and replaced with sheets of vertical siding and during a restoration attempt, the porch roof fell off. The original garage was detached, not the replacement garage is attached to the east side of the house. So although this house is an older building, it has been significantly altered. However, the original windows, frames, size, and shape of the house has not changed, so it is compatible with the neighborhood. The garage was built in 1971, and the siding of the house was replaced at the same time."

The recent investigation of the property showed that alterations to the structure have been and are still ongoing. The southwestern elevation shows recently added plywood siding that matches the work completed in the 1970s. This siding is still unpainted. The original windows (sash) are present on this side of the structure, but the framing varies from elements of the original design to simple framing without window sills.

The main elevation (facing Diamond Street) illustrates a slightly off-centered entry on a porch that has been rebuilt (ca. 1970s). While essentially in the same location on the struc-ture, the porch has been altered to include the plywood siding and an extended step entry. Both front windows have been replaced by aluminum framed windows and the framing has been replaced with simple 1 x 4

boards. The facia boards have also been replaced. A cinder block planter has been added to the front of the house and the realignment of Diamond Street has extended the yard area to the south (note that the utility pole is still relatively close to the house and the City's sidewalk ends abruptly in front of the house).

The northeastern elevation (facing the yard area) is dominated by the presence of the modern addition of the attached garage. The construction of this garage has significantly impacted the original residential siding. This garage, constructed as a standard two car garage mea-suring 22 feet by 22 feet, is actually a one car garage with the majority of the added space being converted to living space. There is a small, aluminum framed window adjacent to the garage door and two other aluminum framed windows facing the yard area. A doorway is also present on the yard-side elevation. The siding on the garage matches that of the house, providing continuity that is presumed to continue to the rear elevation (not accessible at the time of this survey).

The main structure is on a raised foundation while the garage rests on a concrete pad. A concrete driveway runs from Diamond Street to the garage door and an alternative driveway is provided in the yard area.

The structure is wood framed and wood sided (plywood with vertical design elements) and both double hung sash windows (2 over 1 panes) indicative of the 1910s and modern aluminum frame windows. Attic vents have been added to the roof structure. There is a red brick chimney in the center of the structure (visible on the roof), and a new composition shingle roof.

Each of the windows are framed with simple, 1" x 4" boards and some standard window sills are still present. The corners of the structure are also framed with 1" x 4" boards. Facia boards are flat and simple, as are the exposed eave beams (the facia boards have been replaced). The door on the front porch is modern (recently replaced, as indicated by the hardware). The roof line is considered "a medium gable", exhibiting a gable roof with a pitch of approximately 25 degrees.

Overall, the residence is in fair shape, although few of the original design elements are evident. **In general, this structure could be identified as a simple vernacular cottage indicative of the low cost housing designed for the simple working class population supporting the early City development. This structure should NOT be considered a significant resource or a contributing element tot he existing district.**

HISTORIC CONTEXT

The structure located at 625 Diamond Street was built in 1912 (with the original garage structure being added later). Citing the "City of Redondo Beach Historic Context Statement" (1995), the year of construction falls within the period ranging from 1905 to 1923 and associated with the development of the Redondo Beach harbor (Duncan-Abrams and Milkovich 1995). Summarizing their discussion, and as presented by McKenna (1996:22-23), the context is as follows:

> ... the years immediately following the electrification of the Los Angeles and Redondo Railway were prosperous ones for the City of Redondo Beach. Since the port of Los Angeles was not yet complete, Redondo was still an important receiving bay for lumber and oil. Tourism continued to flourish, and industry was attracted to the community by an ambitious city promotion program ...
>
> Redondo Beach owes its physical character and development patterns to the contributions of three separate real estate groups of community promoters ... Redondo Beach experienced a revival or reawakening in 1905 when electric rail magnate Henry E Huntington decided to invest in its future ... Huntington ... built upon the goals and dreams of... earlier promoters and, with his virtually unlimited resources, was able to complete ... dreams of both a seaside resort and industrial port ...
>
> On July 7, 1905, Huntington purchased the interests of the Redondo Beach Improvement Company and, just four days later, he purchased the Los Angeles and Redondo Railway. With these two purchases, he secured a foothold on the bay. Townspeople welcomed his investment reputation. For several days following the announcement of Huntington's investment in city property, the town was overwhelmed by buyers and sellers, each anxious to profit on Redondo Beach land ...
>
> Other investors followed his lead. At least one opened large tracts of previously undeveloped land nearby and subdivided it for agricultural uses ... Within the original townsite, development continued as investors subdivided and/or developed, virtually completing the settlement of coastal Redondo Beach ... The final result was development of the region with diverse areas appealing to a variety of incoming residents.

Backtracking to the earlier development of the City of Redondo Beach, the original townsite was established in 1887 (incorporated in 1892) and within the historic Rancho Dominquez. Charles Silent purchased 1000 acres from the Dominquez family for the purpose of establishing a townsite. William Hammond Hall (California State Engineer) prepared the original site map for the townsite (McKenna 1996:13). Hall used historic names in identifying streets, including names associated with the Dominquez family (e.g. Francisca Avenue).

Redondo Beach was connected to the City of Los Angeles via the Santa Fe Railroad (ca. 1888). The light rail system (the Redondo Railway) was established by 1889. The Los Angeles and Redondo Railway also serviced the area in the 1890s and into the Twentieth Century. Edison completed their substation in Redondo Beach in 1910, providing the community with a local source of electric power.

Construction of single family homes continued into the 1910s and well though the 1920s, eventually resulting in the almost complete development within the original townsite. Redondo Beach boasted of a population of 5,000 in 1920 and another 15,000 residents by 1930.

SUMMARY OF PREVIOUS INVESTIGATIONS

In 1986, the City of Redondo Beach completed a survey of historic resources in the south Redondo Beach area. As noted in the survey report, the goal of the survey was to provide a comprehensive database of all resources; maximize the research effort for structures believed to be of historical importance; and to provide baseline data for the evaluation of the resources (with the main goal of preservation). A rating system was established (Categories A through D, respectively, with A representing significant resources and D having been deemed insignificant. In addition to rating the structures, architectural styles were identified, including: Victorians (1885-1905); Colonial Revival or Neo-Classical Box designs (1900-1912); Cottages or Bungalows (ca. 1912-1940); Craftsman designs (1905-1920); Spanish Colonial Revivals (1910-1925); Period Revivals (1920-1940); and ca. 1940s tract homes (minimal traditional styles). The Cottages or Bungalows were described (see McKenna 1996:54) as follows:

> This category includes small, fairly unadorned houses, beach cottages and California bungalows. Exterior wall surfaces were covered with board and batten, clapboard or stucco. Most styles have large porches and utilize wood frame windows, either double hung or casement. While a large number of modest cottages and bungalows remain in Redondo, few of these were rated A or B.

As a result of the 1986 survey, approximately 1400 pre-1946 structures were identified in south Redondo Beach. A total of 28 were identified as "A" structures;129 were identified as "B" structures; 712 were identified as "C" structures; and 521 structures were identified as "D" structures. California Department of Parks and Recreation 523 Forms were completed for the "A" and "B" structures, only. Using the rating systems developed for the 1986 survey, the property located at 625 Diamond Street would have been identified as a "D" category structure - a building the retains less of its original design or materials , is "fairly modest", and unlikely to be of historical importance. Such a structure would not considered a contributing element of an historic district - assuming a district can be identified (in this case, the district is already recognized). This address is not specifically identified in the 1986 survey, but was subjected to a cursory evaluation during the investigations for an updated survey in 2001 (on file, McKenna et al., Whittier).

RESULTS OF THE CURRENT INVESTIGATIONS

The current research was undertaken to evaluate the structure at 625 Diamond Street, Redondo Beach, at the request of the owner, Alex Yushenko (via Robert Treman Architecture). In applying the rating system adopted during the 1986 survey of the south Redondo Beach area, this structure has been identified and a vernacular cottage (Category D) reflecting significant alterations, replacement of original elements, and additions to the original footprint. To adequately and fully address the potential significance of this structure, McKenna et al. all applied the basic criteria for importance/significance used by the State of California, which reads as follows:

15064.5. Determining the Significance of Impacts to Archeological and Historical Resources [new section as of November 1999]

(a) For purposes of this section, the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code§5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a

local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

With respect to the current property of concern, 625 Diamond Street does not meet the criteria presented in (A), (B), or (D), as presented above. Due to the significant alterations to the structure, Criterion (C) would not apply. The property was constructed in 1912 by Cheetham, a local carpenter and, while not meeting the requirements indicative of the "works of a master", an "important creative individual", nor exhibiting "high artistic values", it would have been one of the many examples of a type, period, region, or method of construction defined as the vernacular cottage/bungalow indicative of the Redondo Beach historic district had it not been altered. However, **alterations have negated that application.**

Small, vernacular cottage/bungalows are found throughout Southern California and are indicative of a general and simple mode of construction associated with the pre-Depression Era. It is not a rare type of structure nor a unique type of structure. In general, and with the alterations recognized, this residence is not a contributing element of the identified district. While the surrounding neighborhood still reflects the early development of the area, this particular structure should be eliminated from the boundaries of the district (it is on the periphery).

McKenna et al. understands that the owner wishes to demolish the existing structure and redevelop the lot as a multi-family property. Although this structure is not a contributing element to the district, the removal of the structure and a noticeable change at this entrance to the historic district will result in an adverse impact to the existing district. Therefore, McKenna et al. recommends that if the City approves the demolition of this insignificant structure, the replacement structure(s) should be designed in a manner that will not visually impact the district (e.g. massing, design, and compatibility).

Jeanette A. McKenna, Principal, McKenna et al. — Date: Feb. 17, 2003

REFERENCES

City of Redondo Beach

2002 Planning Division (City Permits). On file, City of Redondo Beach, Los Angeles County, California.

County of Los Angeles

2002 County Assessor's Records. On file, County Assessor's Office, Los Angeles, Los Angeles County, California.

Duncan-Abrams, Marguerite and Barbara Milkovich

1995 City of Redondo Beach Historic Context Statement. On file, City of Redondo Beach Planning Division, Redondo Beach, California. (also On file, McKenna et al., Whittier, California)

Gianos, Theresa

2002 Personal Communication.

McKenna, Jeanette A.

1996 An Historic context Statement and Updated Historic Resources Survey for the City of Redondo Beach, Los Angeles County, California. On file, McKenna et al., Whittier, California.

2002 An evaluation of the Residential Structure Located at 219 S. Francisca Avenue, City of Redondo Beach, Los Angeles County, California. On file, McKenna et al., Whittier, California).

Thirtieth Street Architects, Inc.

1986 Historic Resource Survey, City of Redondo Beach, July, 1986. On file, McKenna et al., Whittier, California.

APPENDIX A:

Professional Qualifications

JEANETTE A. McKENNA

Owner and Principal Investigator
McKenna et al., Whittier CA

Ms. McKenna specializes in the field of Cultural Resource Management: prehistoric archaeology, historic archaeology, and history. She is a recent-past member of the Board of Directors for the Society of Professional Archaeologists (SOPA 1993-97) and is certified by the Registry of Professional Archaeologists (RPA) to conduct both prehistoric and historic archaeological studies (1998-Present). Ms. McKenna has 26 years of professional experience as an archaeologist and has served on over 600 projects. The majority of her work has been conducted as a Field Director, Project Manager, and/or Principal Investigator in California and Arizona.

TECHNICAL CAPABILITIES

- Vast experience in the greater Southwest, Great Basin, and Southern California regions. Familiar with the full range of cultural resource investigations and has completed projects within the public and private sectors, including environmental management firms, planning and engineering firms, and State and federal agencies.
- Active in the discipline of Cultural Resource Management since 1976 with over 25 years of experience in Southern California and another 5+ years in Arizona, Nevada and Central and Northern California.
- Particular interest in the desert regions of California and Arizona, with specializations in the Proto-historic and Historic Contact Periods.
- Considerable experience in dealing with prehistoric cultural remains and working directly with Native American groups in archaeological training programs (through Arizona State University and the Southern California Indian Center, Garden Grove.

EDUCATION AND AFFILIATIONS

B.A., Anthropology, 1977, CSU Fullerton
M.A., Anthropology, 1982, CSU Fullerton
Lambda Alpha Lambda Honors Society
Post Graduate Studies, Arizona State University, 1982-85
Post Graduate Studies, History Department
University of California, Riverside, 1991-92
Certification Program: CEQA, Land Use and Environmental Planning, University of California, Riverside, 1997-98

Society of Professional Archaeologists (SOPA)/Registry of Professional Archaeologists (RPA) Certification: Field/Prehistoric Archaeology and Historical Archaeology (1984 to Present)

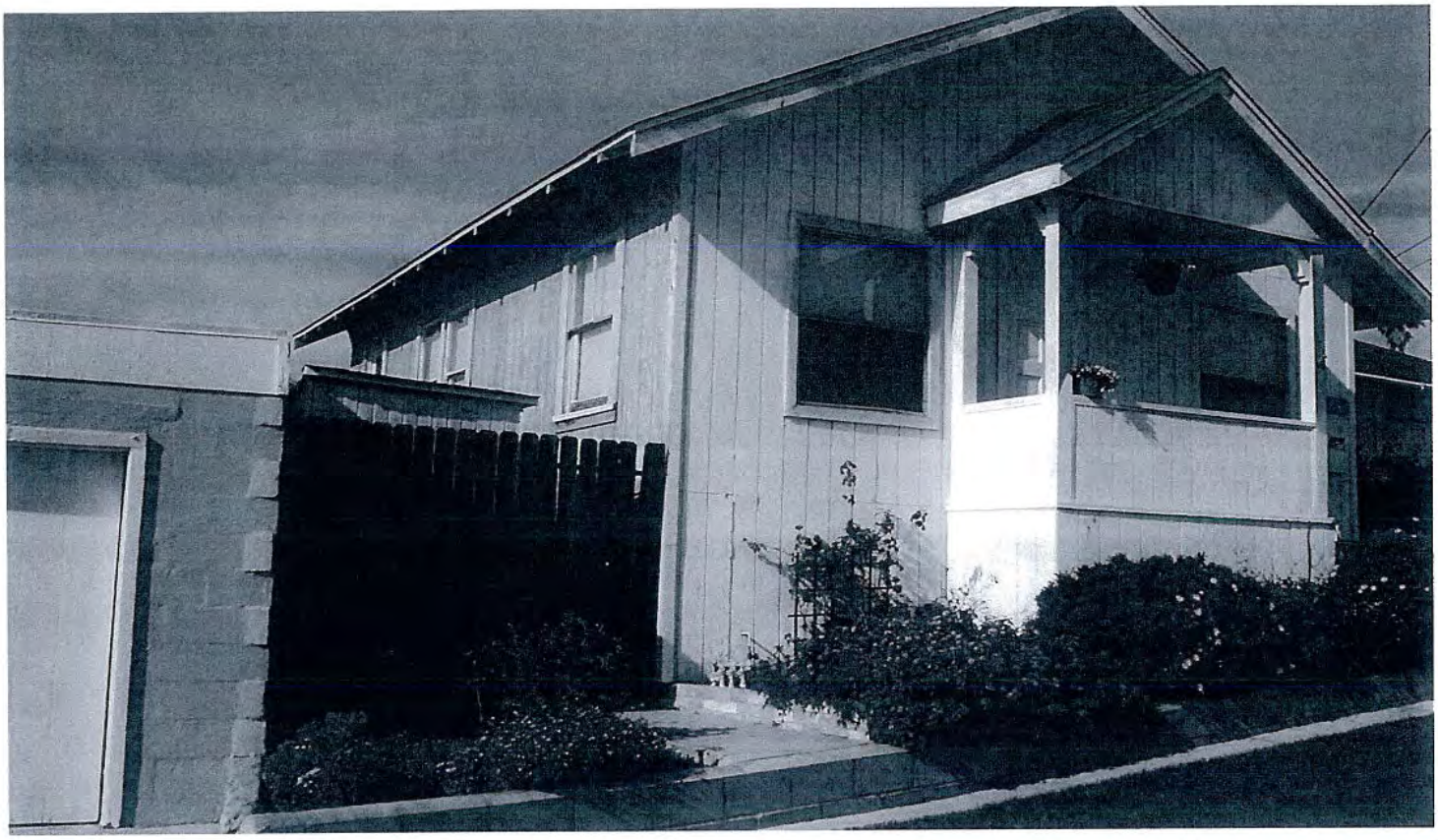
Board of Directors, Society of Professional Archaeologists 1993-1997 (American Society of Conservation Archaeologists Representative)
BLM California Permit No. CA-99-01-031
BLM Arizona State Permit No. AZ-000107
Arizona State Museum Antiquities Permit (ASM 1997-72bl)

SELECTED PROJECT EXPERIENCE

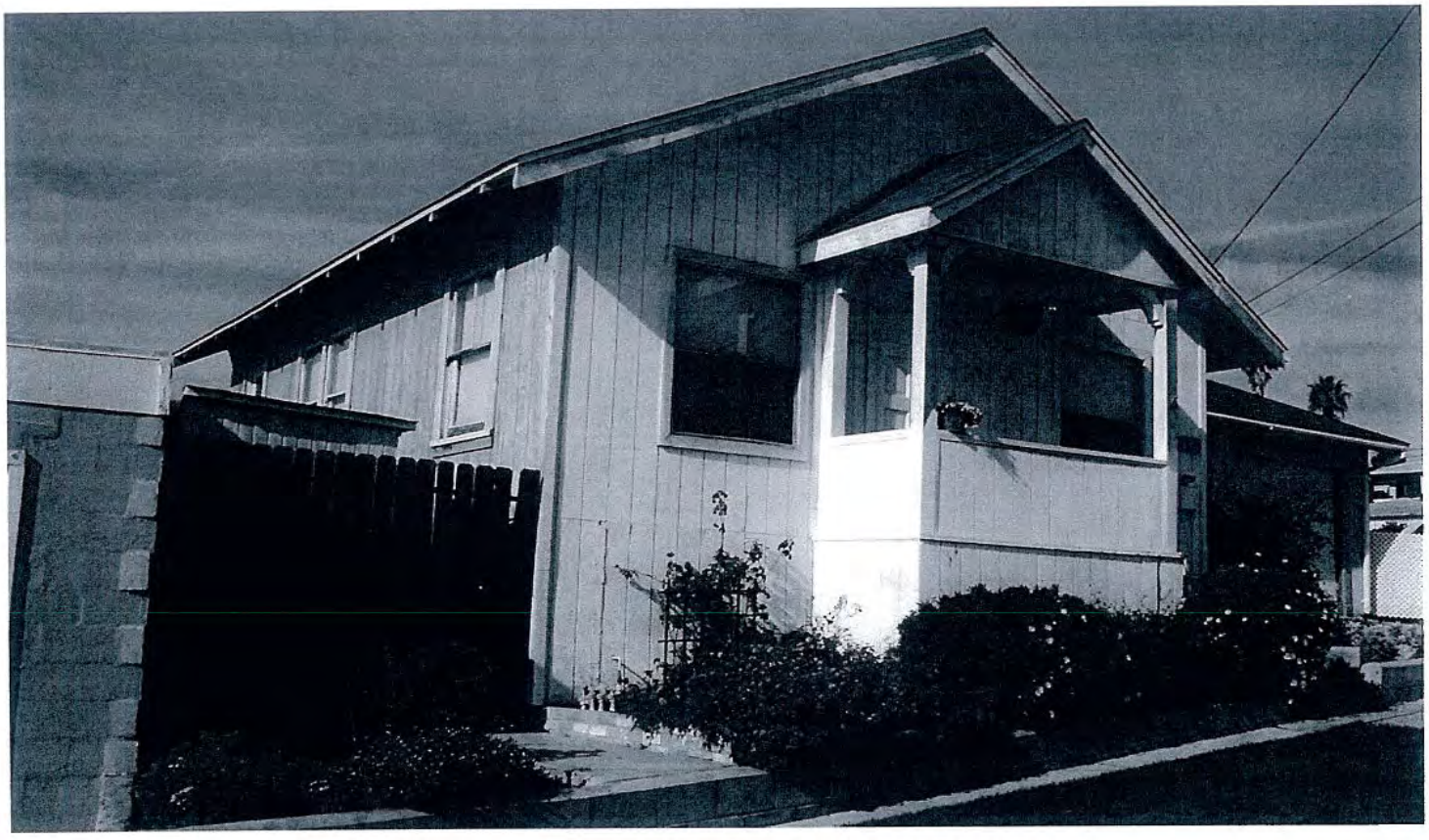
- Historic Architectural Studies for Renovation and Restoration of the Greek Theatre, Los Angeles CA
- Evaluation of Cultural Resources within the Burbank and West Hollywood Redevelopment Project Areas, Los Angeles County, CA
- Historic Property Survey for the City of Whittier, Los Angeles County, CA.
- Archaeological Investigations and Resource Evaluations for the Proposed Cajon Pipeline, San Bernardino and Los Angeles Counties, CA
- Archaeological Class I Investigations for the Proposed Mojave Pipeline, San Bernardino County, CA
- Cultural Resources Investigations (Phases I, II, and III) for the RIX/SARI Projects, Santa Ana Watershed Project Authority (SAWPA), San Bernardino and Riverside Counties, CA
- Phase I, II, and III Archaeological Investigations for the County Sanitation Districts of Los Angeles County, Puente Hills Landfill Solid Waste Management Facility Expansion Project, Whittier, CA
- Archaeological Mitigation Program, The Phoenix Indian School Track Site Project. Arizona State University Office of Cultural Resource Management and the Bureau of Indian Affairs, Phoenix, AZ
- Archaeological and Testing Program for the Hidden Valley Golf Course and Van Buren Golf Course Properties, Riverside County, CA
- Cultural Resources Overview Studies for the Annexation of Unincorporated County Lands to the City of Ontario, CA
- Historic Property Survey Reports: Warner Bros. Main Lot Ranch Lot Properties, Burbank, CA
- Historic Archaeological Investigations for L.A. County Sheriff's Facility, Lancaster, CA.

APPENDIX B:

Photographic Record



Main Elevation of 625 Diamond Street, facing Diamond Street (NW).



Main elevation of 625 Diamond Street (NW).

Main Elevation of 625 Diamond Street (W).

Main Elevation of 625 Diamond Street (WSW).

Overview of Residence and Garage Addition (NW).

Driveway and Causeway along Diamond Street (ENE).

Overview of Garage in Relation to Residence (SW).

Overview of Garage and Yard Area (WSW).

Overview of Property from Corner of Diamond Street and Guadalupe Avenue (SW).

Overview of Causeway along Diamond Street (W).

View of New Siding on South Elevation, 625 Diamond Street (WNW).

APPENDIX C:

Miscellaneous Research Data

41. a. Garage
Contributing

Construction Date: 1922 277-124-64 = 28343

The garage, located on the back of the lot, is built in the same style as the house with clapboard siding and a gable roof.

42. 505 North Guadalupe Avenue
Contributing

Construction Date: 1907 277-124-65 = 28344

This one-story wood clapboard house has a composition medium hip roof. A gable roof covers the front porch. The gable fascia and exposed rafter ends have cut out designs. The house has three bay treatments. The front bay is rounded and has two double-hung windows with shutters and a plain molding. The front porch has wrought iron porch supports and rails, a wooden front and screen door.

43. 505-1/2 North Guadalupe Avenue
Contributing

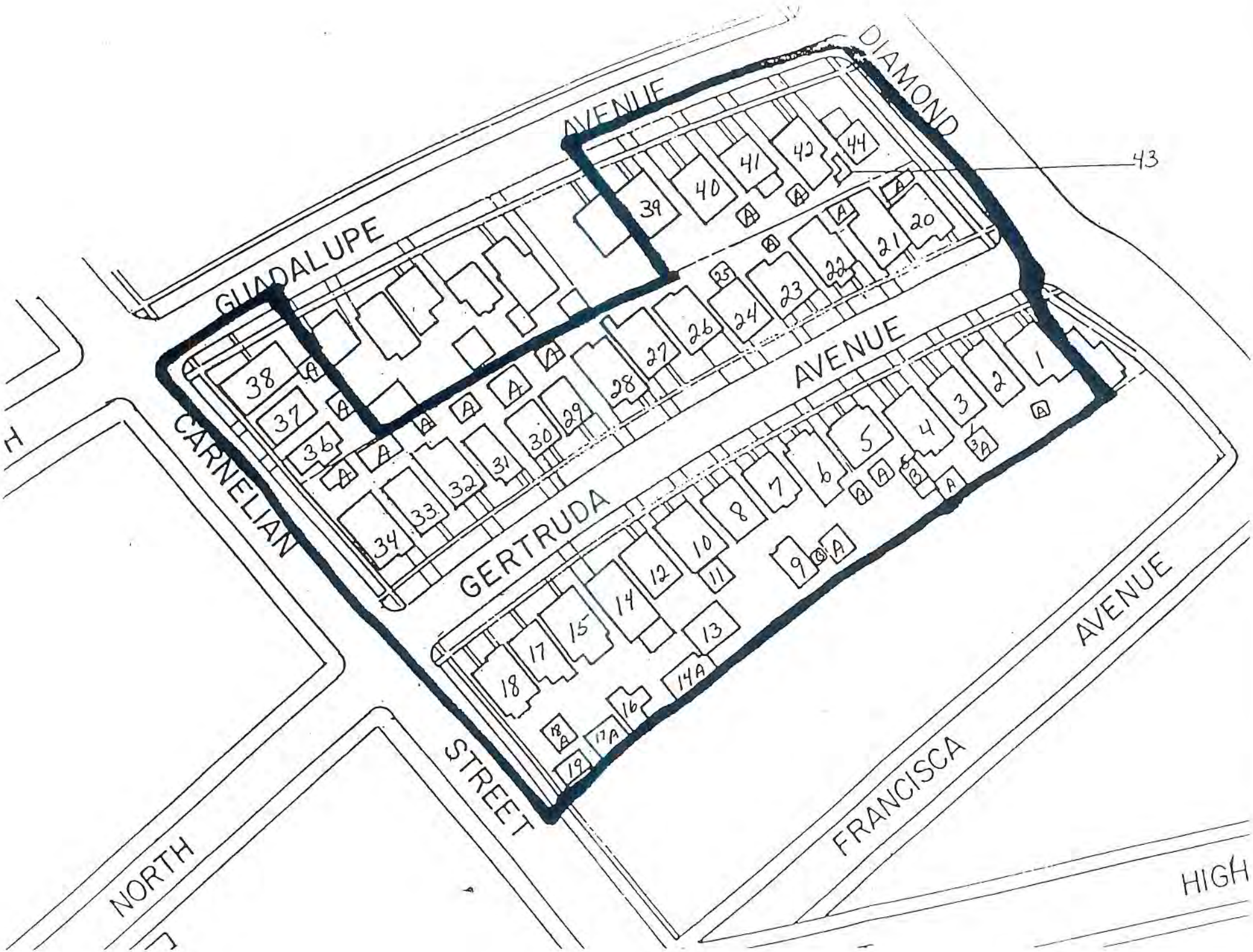
Construction Date: 1907 277-124-66 = 28345

There is a small, one-bedroom "L"-shaped house on the southwest corner of the lot. A low pitch gable roof is covered with asphalt shingles and the walls are board and batten. Part of the building appears to be a single wall structure, but this has not been determined.

44. 625 Diamond Street
Non-contributing

Construction Date: Circa 1912 277-124-67 = 28346

This is a single-story house with a medium gable roof. The original siding was removed and replaced with sheets of vertical wood siding and, during a restoration attempt, the porch roof fell off. The original garage was detached, now the replacement garage is attached to the east side of the house. So, although this house is an older building, it has been significantly altered. However, the original windows, frames, size, and shape of the house has not changed, so it is compatible with the neighborhood. The garage was built in 1971, and the siding of the house was replaced at the same time.


GUADALUPE
AVENUE
DIAMOND
AVENUE
CARNELIAN
GERTRUDA
AVENUE
STREET
NORTH
FRANCISCA
AVENUE
HIGH
43

LOT 2 BLOCK 118 TRACT TS

ST. ADDRESS 625 Diamond

SIZE BLDG. ZONE R-3 FIRE ZONE 3

CONTRACTOR

USE OF BUILDING

PERMIT NO.	DATE	NAME	DESCRIPTION
438	5/1/12	C. R. Cheetham	Res.
[illegible]	7-14-71	[illegible] Steger	[illegible] to Res
B961473	7-17-96	STEGER	re-roof
		(Over)	

11-24-97
2-13-02

FINAL ON BUILDING: B961473 11-14-97

REMARKS:

7503 26

MB.	PG.	PCL.
39	1-17	1

TENTS — TRAILERS —

NON-CONFORMING BUILDINGS

Catholic church, Father James A. O'Callaghan, pastor, 124 N. Elena Ave.
Catter, Lenore, Miss, r. 207 Emerald
Caupas, J. R., laborer, h. 425 N. Francisca
Cavanah, James H., real estate and president of board of trustees, 103 Emerald, h. 106 N. Elena Ave.
Chaffin, George B., h. 231 S. Jaunita Ave.
Chalvin, Lewis, student, r. 224 S. Catalina Ave.
Chamberlin, J. D., retired, 120 S. Broadway
Chambers, Reginald, case hardener, h. 111 N. Elena Ave.
Chamber of Commerce, F. R. Fancher, pres.; W. W. Whitten sec.; Pavilion Bldg.
Chamness, Lowell, asst. cook Bon Ton restaurant, r. 129 S. Elena Ave.
Chamness, Sarah, Mrs., r. 127 S. Elena Ave.

Chandler, George, emp., Coleman & Co., r. 115 S. Guadalupe Ave.
Charlesworth, James F., retired, h. s. e. cor. Pearl and Guadalupe Ave.
Charlesworth, Oliver E., (The Electric Shop) with Redondo Hardware Co., 122 N. Pacific Ave., r. s. e. cor. Pearl and Guadalupe Ave.
Charlesworth, Henry A., (The Electric Shop) with Redondo Hardware Co., 122 N. Pacific Ave., r. s. e. cor. Pearl and Guadalupe Ave.
Charlesworth, Henry, steamfitter S. O. Co., h. rear 214 N. Benita Ave.
Charters, Crane, barber, r. Phoenix rooming house
Chase, Elizabeth, Mrs., r. 620 N. Jaunita Ave.
Cheek, Claud, timekeeper S. O. Oil Co., r. 319 N. Gertruda Ave.

Cherry, Joseph, laborer Redondo Water Co., h. 217 El Redondo
Cheetham, William, retired, h. 617 N. Juanita Ave.
Cheetham, C. R., carpenter, r. 617 N. Jaunita Ave.
Chilpasa, James, laborer, h. 217 S. Elena Ave.
Chilsom, Henry, yard master Santa Fe, r. 425 S. Catalina Ave.
Chrisman & Chrisman, (James M. and E. L. Chrisman) grocery and bakery, 102 N. Pacific Ave.
Chrisman, Ernest L., (Chrisman & Chrisman) h. 116 N. Benita Ave.
Chrisman, James M., (Chrisman & Chrisman) h. 233 S. Broadway
Christian church, 225 S. Catalina Ave.
CHRISTOPHER'S ICE CREAM, Brady's drug store
Cholvin, Lewis, student, r. 128 S. Catalina Ave.
Cholvin, Mary, Miss, student, r. 128 S. Catalina Ave.

Church, John, emp. P. L. & P. Co., h. rear 333 S. Elena Ave.
Churchill, A. P., Mrs., housekeeper Rialto Apts., 236 S. Pacific Ave.
Churchill, Milda, Miss, emp. Lemon's studio, Rialto Apts.
Churchill, Wilma, Miss, student, r. Rialto Apts. 236 S. Pacific Ave.
COX, HENRY, E., president Redondo Hardware Co., h. Ninth and Speedway, Hermosa Beach
Clair, A. H., carpenter, r. 212 S. Catalina Ave.
Clark, E. L., Miss, dressmaker, h. 507½ N. Francisca Ave.
Clark, Henry H., lineman, Southern California Edson Co., h. 314 Emerald
Clark, L. E., machinist, r. 215 N. Broadway

D

Daigh, John E., retired, h. 219 N. Catalina Ave.
Daigle, Theodore, emp. S. O. Co., r. English Block rooming house
Daniels, C., h. 327 S. Elena Ave.
Davis, Charles H., fireman P. L. & P. Co., h. 218 Carnelian
Davis, Elmer, boot black, 110 N. Pacific Ave., h. rear 200 S. Pacific Ave.
Davis, Frank W., retired, h. Cliffton-by-the-Sea, Esplanade, near Avenue G
Davis, Fred, cook Coney Island restaurant, r. 298 N. Benita Ave.
Dawson, Lewis B., emp. P. E. shops, h. 304 S. Francisca
Dawson, Lottie, Mrs., retired, h. 412 Beach Row
Day, A. S., car inspector P. E. Ry. Co., h. 506 Camino Real

D. & D. Drug Store (E. C. and H. C. Dusendschon, props.) 104 N. Pacific
Dean, Harry I., craneman P. L. & P. Co., h. 406 Beach Row

Deaton, M. E., Mrs., h. 121 S. Francisca
Deckman, Mattie, Miss, cashier pavilion dance hall, r. 220 N. Catalina Ave.
Deckman, Nancy J., Mrs., checkroom clerk, pavilion dance hall, h. 220 N. Catalina Ave.
Deckman, W. H., asst. supt. bath house, h. 514 Garnet
Defouri, Joseph, gardener, h. 517 S. Camino Real
de Garmo, William I., real estate, h. 412 S. Broadway
de Garmo, Susan M., Miss, teacher, r. 412 S. Broadway
de Garmo, Father Charles H., pastor Christ Episcopal church, r. 408 S. Broadway
Deisler, Gust, retired, h. 211 S. Lucia Ave.
De Jay, Maud, Mrs., h. rear 214 N. Benita Ave.
Denning, T. E., carpenter, h. 352 El Redondo

Denten, Clem, foreman B. A. P. Co., h. s. w. cor. Pacific Ave and Broadway
De Rycke, George, laborer Western Fuel Gas & Power Co., r. Hermosa
Desmond, Joseph, clerk P. W. Santo's store, r. 114½ N. Pacific Ave.
De Simone, Alfonso, prop. P. W. Santo grocery and bakery, 100 S. Pacific Ave., residence Los Angeles
DETROITER AUTOMOBILES (The Fritz-Forbes Realty Co., Agents) 218 S. Pacific Ave.
Detter, F. P., retired, h. 502 N. Helberta Ave.
Detter, Ralph W., teacher high school, h. 510 N. Guadalupe Ave.
Devlin, Samuel H., Union Tank Line agt., h. 625 Diamond

Dawson, Mrs. Lottie, housekeeper, r. 412 Strand
Day, Emilia M., landlady, h. 228 N. Catalina ave.
Day, Mrs. Harriet, journalist, r. Fritz Apartments, 222½ S. Pacific
Day, Mrs. Sarah, r. 323 Garnet
Day Apartments, Mrs. Amelia M. Day, prop, 228 N. Catalina ave.
Day, A. S., wife May, grocer, 419 N. Broadway, res, same
Day, F. C., r. 240 S. Pacific ave.
Daytona Apartments, Andrew J. Hoter, prop., 210 Strand
D & D Drug Store, Henry C. Dusendschon, prop., 100 N. Pacific ave.
Dearwester, J. M., wife Nora, bridge carpenter, h. 230 S. Francisca
Deckman, Mrs. N. P., emp. P.E., r. 111 N. Catalina ave.
Deckman, Miss Mattie A., emp. P.E., r. 111 N. Catalina ave.
Deckman, W. H., wife Pearl, asst. supt. bath house, 226 S. Helberta
Defouri, Joseph, wife Claudine, gardener, h. 517 S. Camino Real
de Garmo, Rev. Father, Rector Christ Church, r. 408 S. Broadway
de Garmo, William Inman, wife Emily, h. 412 S. Broadway
de Garmo, Susan Margaret, school teacher, r. 412 S. Broadway
DeLong, W. A., wife N. M., mgr. Associated Oil Co., h. 805 N. Juanita ave.
DeLong, Charles F., prop Sea Gull Inn, Esplanade and Avenue B
DeVille, Mrs. Lola, r. 412 S. Francisca ave.
Denning, Mrs. A. E., r. 352 El Redondo
Densmore, Andrew, wife Mary, engineer pile drier, h. corner Pearl and Elena ave.
Denton. D. C., foreman grader, r. 527 N. Francisca ave.
Derycke, George, wife Leontine, emp. Gas Co., h. 823 N. Juanita ave.
Desler, G., wife Elaine, retired, h. 211 S. Lucia ave.
Desmond, Fred, wife Trica, grocer, h. 215 Garnet
Dressler, A., wife A., retired, h. 221 S. Broadway
Devlin, S. H., wife Ida, Union Tank Line foreman, h. 515 N. Gertruda
De Simone, Alfonso, wife T. D., prop. P. W. Santo grocery, 110 S. Pacific ave., h. 215 Garnet
Diamond Laundry, Mrs. Mollie Daigh, prop., 105 Emerald
Diaz. Asencion, trackman P.E., Juanita Camp
Dickson, John J., wife Elizabeth, emp. Standard Oil Co., h. 502 N. Francisca ave.
Dickson, Miss Marie, principal North school, r. 205 S. Catalina ave.
Diehl, Mrs. Fay, r. 129 S. Catalina ave.
Dimit, L. E., plumber, r. 319 Tenth
Dimock, A. W., 605 N. Irena ave.
Diver, J. W., wife May E., (waiter The Coffee Room), r. English Blk.
Dix, Lesley A., laborer, h. 200 S. Helberta ave.
Doig. Robert W., wife Jean M., carpenter, 234 S. Elena ave.
Doolittle, Mrs. J. G., h. 215 S. Catalina ave.
Dorman, Mrs. Eleanor, r. 207 N. Catalina ave.
Dorman, D. M., owner Crescent creamery, r. 207 N. Catalina ave.
Dorsey, D., wife Effie, fisherman, h. 512 N. Elena ave.
Dorsey, S., wife Rosie, fisherman, h. 227 S. Juanita ave.
Dortch, A. M., wife Lalla, motorman, h. 525 N. Guadalupe ave.
Downs, Mrs. Sarah, clerk Chrisman & Chrisman, r. 116 N. Benita
Dorrington Apartments, 108 N. Broadway, F. E. Dorrington, prop.
Dorrington, Clinton, emp bath house, r. Dorrington Apts.
Dorris, Mrs. L., housekeeper, r. 565 Esplanade
Dorrington, F. E., wife Christina, contractor and builder, h. Dorington Apts., 108 N. Broadway
Dorrington, D., emp. bath house, r. 108 N. Broadway
Douglas, Florence E., r. 326 El Redondo
Drake, Mrs. Kathleen, r. 206 Strand
Drake, Mrs. Mary, housekeeper, r. 116 S. Catalina ave.
Drake, Herbert, wife Viola, carpenter, h. 116 S. Catalina

Dressen, Emil, barber, r. 127 N. Benita ave.
Dressin, Emil H., barber Miller's shop, r. 127 N. Benita ave.
Drum. William M., wife Annie, painter and paper hanger, h. 202 N. Benita ave.
Dutcher, H. F., wife Florence, clerk Standard Oil Co., h, 136 S. Bdy.
Duffy. J. E., wife Emily, asst. cashier F. & M. Nat. Bank, r. 114 S. Guadalupe ave.
Duggin, G., wife Annie, retired, h. 327 N. Gertruda ave.
Duncan, Oscar S., wife Hattie B., prop Ocean Front Cafeteria, h. 108 S. Catalina ave.
Dunn, Helena H., Redondo Beach Hospital, 408 Esplanade (Aman & Dunn
Dunn, G. W., wife Phoebe R., wharf employe, h. 220 S. Francisca
Duran C., wife Juana R., trackman Santa Fe Ry, h. cor Carnelian and Pacific ave.

Duran, Greforia, wife Concha, h. 832 N. Juanita ave.
Durlin, Frank, musician Pavilion Theatre, r. La Neptune Apts.
Dusendschon, E. C., Redondo Drug Co., 128 N. Pacific ave., r. Garland Apts.
Dusendschon, Henry C., wife Erba, D & D Drug Store, r. Marshall Apts.
Dwight, Fred D., wife Myrtle D., motorman, h. 324 S. Irena ave.

E

Eagle Nest Cafe, W.W. Niece, prop., 106 N. Pacific ave.
Eagle Nest Rooms, 106 N. Pacific ave.
Earl, George, emp Warman Steel Casting Co., r. rear 217 S. Catalina
Early, Henry, retired, r. 725 Sapphire
Easley, T. R., wife Ada E., real estate, h. 124 S. Helberta ave.
Eckert, W. J., wife Allie, r. Vail Apartments
Eckles, Mrs. M. A., landlady, r. 209 N. Catalina ave.
Edison, S. C., wife Nora, carpenter, h. 118 S. Catalina avenue
Edison, Willetta, r. N. Irena ave.
Edmonds, Edwin, emp. bath house, r. 500 N. Gertruda ave.
Edmonds, Dr. Charles A., wife Harriet A., retired, h. 112 N. Helberta
Edwards, Robert, emp. Montgomery-Mullin Lum. Co., r. 404 Strand
Edwards, Mrs. E. M., h. 500 N. Gertruda ave.

Butt, Dr. E. G., wife Olive May, Physician and Surgeon, office Farmers & Merchants National Bank Bldg., h. 304 N. Gertruda ave.
Buxton, John G., wife Mary E., retired, h. 305 El Redondo
Buxton, Ruth A., student, r. 305 El Redondo
Byerle, Perry, r. 510 N. Guadalupe ave.

C

Cady, George, wife Lily, chef, h. 123 S. Elena Ave.
Calahan, Mrs. Emilia, h. 601 N. Guadalupe Ave.
Calahan, Edward H., emp. Huntington Land Co., h. 601 N. Guadalupe
California Apartments, 110½ S. Pacific, Mrs. Cynthia Peterson, prop.
Calrera, Augustin, wife Delfina, track man, h. Juanita Camp
Campbell, W. H., wife Della, retired, h. 202 S. Catalina Ave.
Campbell, Frank, fisherman, h. rear 124 S. Broadway
Cancholo, Presiliano, wife Simeno, h. 832 N. Juanita Ave.
Capron, G. B., wife Anna, machinist Sunset Garage, h. 215 N. Sunset Court
Carl, B. J., merchant, h. 604 N. Juanita ave.
Carner, William, wife Lizzie, farmer, h. 213 S. Francisca Ave.
Carner, Miss Helen, emp. J. Stamas, r. 213 S. Francisca ave.
Carner, Miss Irene, emp. J. Stamas, r. 213 S. Francisca Ave.
Carrillo, Ramona, housekeeper, r. 213 El Redondo
Carrillo, Matilda, r. 213 El Redondo
Carson, George W., wife Anna, emp. Edison Co., h. 120 N. Elena Ave.

Carson, Marie, r. 120 N. Elena ave.
Carstensen, Miss M., clerk city fish market, r. 235 S. Francisca ave.
Carstensen, H., prop. city fish market, 118½ N. Pacific Ave., h. 235 S. Francisca Ave.
Cart, A. F., wife Josie, clerk, r. 817 N. Juanita ave.
Casadias, Miguel, track man P. E., h. Juanita Camp
Cash Meat Market, Frank Irvin, prop., 302 Diamond, h. 304 Diamond
Cate, George, wife Mary E., undertaker, h. 207 N. Catalina Ave.
Catey, Mary A., widow Henry, housewife, h. 601 S. Elena ave.
Catey, Minnie L., school teacher, r. 601 S. Elena ave.
Catey, Emma, asst librarian, r. 601 S. Elena ave.
Catey, George W., wife Ethel H., well contractor, r. 605 S. Elena ave.
Catherman, Charlie, tallyman, Montgomery & Mullin Co., h. 500 N. Gertruda Ave.
Catteral, Harry L., emp. Redondo Fish Co., r. Aberdeen Apts, 122 S. Benita ave.
Cavanah, J. H., wife Lorene, real estate, 103 Diamond, h. 106 N. Elena ave.
Central Garage, 117-119 Diamond, (A. & E. W. Koppe, prop.)
Chamness, C., restaurantman, r. 114½ N. Pacific ave.
Chambers, R., emp. Union Tool Co., Torrance, wife Ida, 130 S. Catalina ave.
Chamberlain, J. D., retired, h. 118 S. Broadway

Chamness, Mrs. D. S., r. 115 Diamond
Chamness, John L., second cook Bon Ton rest., h. 125 S. Elena
Chandler, George, machinist Star Backsmith Shop, r. 115 S. Guadalupe Ave.
Chapman, Walter P., wife Elizabeth, retired, 213 S. Elena ave.
Charlesworth, J. F., wife Jennie, grocer, 103 W. Diamond, h. 209 N. Broadway
Charlesworth, H., wife Alice, steam fitter, h. 417½ S. Elena ave.
Charlesworth, O. E., electrician with Redondo Hdw. Co., r. 209 N. Broadway
Charlesworth, Mrs. Alice, emp. J. Stamas, r. 417½ S. Elena ave.
Charlie's Shoe Hospital, Chas. Lloyd, prop., 105 Emerald
Chase, Mrs. E., r. 620 N. Juanita ave.
Cherry, Joseph, emp. Redondo Water Co., h. 217 El Redondo
Cherry, Addison, emp. bath house, h. 217 El Redondo
Cheetham, C. R., wife Christina, h. 617 N. Juanita ave.

Cheetham, Mrs. D. H., widow William, h. 617 N. Juanita ave.
CHIEF OF FIRE DEPARTMENT, Chas. J. Funk: Fire Station City Hall; res. 602 N. Guadalupe Ave.
Childress, J. W., wife Sally, engineer, h. 222 S. Juanita ave.
Chiposa, J., wife Sarah, emp. city, h. 217 S. Elena ave.
Chiposa, Hazel, at home, r. 217 S. Elena ave.
Cholvin, Frances, 601 N. Guadalupe ave.
Cholvin, Lewis J., wife Myrtle, billiard hall, 106 S. Pacific ave., h. 309 Garnet
Chrisman, E. L., wife Edith, grocer, (Chrisman & Chrisman) h. 116 N. Benita ave.
Chrisman, J. M., wife Rachel M., retired, h. 233 S. Broadway
Chrisman, Victoria I., art teacher, r. 233 S. Broadway
Chrisman & Chrisman, grocers, 104 N. Pacific Ave.
Chrisman, Miss Ruth, r. 116 N. Benita
Church, Mrs. Myrtle I., Mount's lunch counter.
Churchill, George, wife Lucy, retired, h. 208 Diamond
Churchill, F. B., Sewing Machines, 122½ S. Pacific Ave., r. same
City Fish Market, H. Carstensen, prop., 118½ N. Pacific ave.
Clark, C. H., wife Elizabeth, fisherman, h. 214 Sunset court
Clark, Percy, fisherman, r. 214 Sunset court
Clark, Gladys, emp. J. Stamas, r. 214 Sunset Court
Clark, Cecilia, r. rear 509 N. Francisca ave.
Clark, H. H., wife Lutitia, laborer, h. 116 N. Elena ave.

COMMERCIAL ST—North from Emerald 1 blk e Pacific Av
107 Merithew H E
107½ McMannon G P
109 Nickell H E
111 Murphy E J
111½ Hotel Elk (rear)
112 Colorado Hotel (rear)
115 Commercial Hotel (rear)
117 Trinity Mission
118 Noble John
119 Leimert L O mfr
129 Johnson E C plumber
131 Hanson H W tinsmith

DIAMOND ST—East from Strand 1 blk n Emerald
3 Seaside Gem Cutters
5 Silver Spray Lunch Room
6 Agate Gem Cutting Plant
7 Wardrop F J restaurant
9 Wells W M restaurant
11 Hedrick & Son cigar mfrs
12 Barbecue restaurant
17 Art Theatre
El Paso begins
Pacific Av intersects
100-102 El-Ja Arms Hotel
101 P E Ry
104 Fancher F R safes
McNay J C express
106 Sample Store
108 Hunt L G chiropractor
Commercial St ends
114 Browning W M real est
115 Hedrick Alta Mrs furn rms
116 Army & Navy Store
117-119 Central Garage
118 Melich & Rutledge autos
121 Mitchell & Dable real est
Benita Av intersects
201 Golden West Mkt
203 Hess Sarah Mrs
6 Indiana Apts
210 Hildebrand C R
Sunset Ct intersects
212 Bradhurst D M
215 Reliable Fruit Mkt
216 Renfro Eliza Mrs
217 Ruge E W
Jenkins J J
219 Redondo Dye Wks
220 Learey E S baker
Sam Seelig Co grocers
Trowbridge C M meats
221-23 Cates Geo undertaker
n s M E Church
North Catalina Av intersects
300 Turner A S grocer
302½ Johnson R D
304 Meacham H D real est
306 Ayres A W shoe repr
306½ Wallace J F
308 Harris W J
309 Meek C I
310 Johnson Carel
315 Griffin H N autos
321 Diamond Apts
323 Hodges A H S furn
327 Redondo Transfer & Stor
329 Costley & Newman paints
Broadway intersects
412 Jeffries & Meek autos
Elena Av intersects
Camino Real intersects
ss Union High School
Francisca Av intersects
601 Kiley W J
607 Craig W T
615 Redd E S Mrs
616 Sneed Burwell
Gertruda Av begins
625 Blatter E G
Guadalupe Av intersects
711 Hickman Joseph
713 Corcoran C C
Helberta Av intersects
801 King J M
815 Whitchurch I R
Irena Av intersects
Juanita Av intersects
Huntington St intersects
1011 Matheson Alexander
1019 Midgely Frederick

EIGHTH ST—East from Strand 1 blk n Seventh St

EL PASEO—NORTH, North from Emerald St
101 Redondo Sweet Shop
103 Hill's Billiard Hall
105 Shriner's Cafe
107 Gould F F concession
109 Hippodrome
111 Burall C R concession
113 Anderson A R concession
115 Cafe De Bob
117 Turquoise Cafe
119 Shipman Ed concession

120 Lamberson B G concession
120½ Ebnet Chas concession
121 Redondo Fish Co
123 Old Mill concession
125 Redondo Shooting Gallery
127 Spanish Cafe
129 Van Calbergh Eugene con
129½ Clark M E Mrs concssn
Cozy Corner Lunchery
131 Dodge 'em concession
Midway begins
133 P & L Lunch
137 Greenberg David concssn
141 Redondo Racing Coaster
141½ Clark A B concession
143 Bosch Sidney concession

EL PASEO—SOUTH, South from Emerald St
101 Redondo Bazaar
103 Old Dinty's Place, restrnt
105 Old Mission Ice C parlor
107 Willis Josephn Mrs concsn
109 Pavilion Cafe
111 Barriatt & Bougamont, bil
115 Redondo Ice Cream Parlor
122 Santa Fe Ry depot
W U Tel Co
125 Speero Cafe
127 Capitol Theatre
132 Shamrock Sweet Shop
133 Panton W E confectionery
134 Vacant
135 Redondo Grill
137 Cholvin L J popcorn
138 Garland Cafe
139 Bath House
142 California Cafeteria
201 Ocean View Cafe
205 Moore M H restaurant
209 Redondo Bazaar

EL REDONDO—EAST, East from N Guadalupe Av to Garnsey St 1 blk n of Emerald
201 Carson A M Mrs
203 Kitchen J H
207 Burt W B
211 Vacant
213 Hernandez Ygnacio
217 Wanholz Will
226 Pearson Bernard
233 Foote J L
234 Ellsworth R W
rear Williams Wilbert
Vincent intersects
311 Wagner M C
Garnsey St begins

EL REDONDO—NORTH North from Vincent St to Garnsey St 1 blk e of Elena
302 Woodman T H
304 Shook E T
306 Myers C F
306½ Woods Richard
308 Vacant
312 Carter H B
314 Gitt Lola E
316 Westrich A L
Stevens G A
318 Warwick A H
Thompson G E
320 Silver J N
N Francisca Av intersects
322 Drake B M
326 Richardson H F
N Gertruda Av
335 Black I E
N Guadalupe Av
337 Doughty W H
Black A B
339 Dick T P
327 Sutton B H
350 Buxton J G
352 Mothershead Chas
426 Lietz E W
Garnsey St begins

EL REDONDO—WEST, West from N Guadalupe Av to Vincent 1 blk n of Emerald St (west side)
121 Jones C R
202 Morgan W R
203 Davis E M
205 Geery F H grocer
205½ Cline Monroe
207 McDonald M D Mrs
209 Geery F H
Guidry John
Sutten J A
211 Phillips S B
213 Gonzales Miguel
215 Brumter Harry
216 Gifford H L
217 Shalitt Raphael
Case G M
Kiracofe S W
219 Stine J P
221 Hills H V

Berks Albt M (Annie V) lab street dept h 520½ N Elena Av
Berks Gerhardt (Sabina) h 626 N Guadalupe Av
Berner Augusta (wid F W) h 314½ N Francisca Av
Berner Jacob (Martha J) h 105 S Guadalupe Av
Bernhard Jennie (wid Reinhard) r 701 S Broadway
Berry Frank A (Anita D) driver B M Torrens h 306 N Catalina Av
Berry H Arthur (Henrietta) oil wkr h 703 Hermosa Av
Berryhill Cecelia usher Capitol Theatre r 110 N Benita Av
✕ Berryhill Chas M (Josie L) h 110 N Benita Av
✕ Bertelsen Florence Mrs slsmn Southland Real Estate Exchange r 406 N Broadway
✕ Berth Helen E (wid Theo) slsmn J P Luxford h 214 Av B
Best John A (Estelle) barber h 217½ S Catalina Av
Beverage Roy carp r rear 507 N Francisca Av
Bickel Carson oil wkr r 114½ N Pacific Av
— Biddle Geo H (Belle J) carp h 208 N Catalina Av
— Bidwell Harry H (Ora) cond P E Ry h 321 Diamond
Bigelow Lewis H (Alice M) firemn S O Co h 339 S Elena Av
Bigelow Lizzie F (wid Geo E) r 339 S Elena Av
Billings Wm (Alice A) h 114 S Lucia Av
Binker Otto H (Daisy) lab h 807 N Lucia Av R F D 1
Binns Michael D mech Ocean View Garage r 298 N Pacific Av
Biocina Harry L (Redondo Grill) h 131 S Benita Av
Biocina Speero (Mary F) prop Speero Cafe h 310 Garnet
Bird, see Byrd
Birmingham Gilbert O linemn Edison Co res L A
Bishop Viola M tchr North Sch r El Ja Arms
Bitner Elmer E (Annie) mech Jefferis & Meek r 226 El Redondo
✕ Bixby Otto (Maude F) janitor Central Sch h 117 S Francisca Av
Bjorklund Chas (Hannah) blksmth h 622 N Guadalupe Av
Bjorklund Helga nurse r 622 N Guadalupe Av
Black Adrian lab h 611½ Vincent
Black Alex R (Cerrena) prop Black's Bird Emporium res Gardena
Black Anna B (wid Jas E) h rear 337 N El Redondo
Black Anna C nurse r 207 N Catalina Av
Black's Bird Emporium A R Black prop 127 Bond
Black Burton (Laura V) carp h 111 S Juanita Av
Black Howard C r 111 S Juanita Av
✕ Black Ivar E (Mabel P) cond P E Ry h 335 N El Redondo
Black Lucy J Mrs prop Golden West Apts h 221 Carnelian
— Blackmer Fred D (Elizabeth B) h 229-A N Catalina Av
Blackmer Lloyd B lineman P E Ry r 229-A N Catalina Av
Blackmer Margaret A student r 229-A N Catalina Av
Blagg Walter L (Emma A) lab Patten & Davies Lbr Co h rear 205 N Broadway
Blaine Jas C r J W Blaine
Blaine John W (Clara S) glass wkr res El Nido R F D (Redondo) 1
— Blair Thomas (Blanche) ins agt h 245 S Elena Av
Blakeslee Edwd N h 18 Midway
BLAND GROCERY CO. (Howard Bland), Groceries, Fruits and Vegetables. 106 N. Pacific Av. Phone 3031.
Bland Howard (Bland Grocery Co) res Hermosa
Blasius John H (Helen W) driller h 216 S Francisca Av
Blatter Edwd G (Anna M) gardener High Sch h 625 Diamond

Blatter Sheldon lab Gas Co r 625 Diamond
✕ Blausey Frank E (Mattie) dist supt Edison Co h 311 N Gertruda
Blew Geo W steel wkr r 415 Emerald
— BOAZ, JOHN K. (Laura Patten) ,(Tenan & Boaz) h 298 N. Pacific
Bobo Susan M Mrs r 433 S Elena Av
Bodine John A (Lovie) glass wkr h 1300 N Pacific Av
Bodkin Benj h 110 N Benita Av
Boekinaagen Gladys tchr High School r 217 S Helberta Av
Bogue Frank P (Lillian B) h 308 S Broadway
Bogue Herbert L (Mildred C) emp S O Co r 314 S Broadway
Bokofsky Percy clk Reliable Fruit Mkt r 202 N Sunset Ct
Bokofsky Sam (Rosie) prop Reliable Fruit Mkt h 202 N Sunset Ct
Bollinger Lydia A nurse r 321 N Gertruda Av
— Bond Ivan E (Hazel T) mech Hermosa h 111 N Elena Av
Bone Wm M (Alice) oil wkr h 806 N Irena Av
✕ Bonham Fred A (Phoebe M) opr Edison St Plt h 502 N Guadalupe
✕ Bonser Wm C (Nellie W) agt P E Ry h 522 S Gertruda Av
Bon Ton Cafe Mary Michael prop 116 N Pacific Av
Booe Bert A (Laura M) emp P E Ry h 304 11th
Booker T E oil wkr r rear 809 Hermosa Av
✕ Boone Wm R (Grace A) pumper S O Co h 404 N Guadalupe Av
Boose Harriet J Mrs (Lawrence & Boose) h 607 Hermosa Av
Booth Amelia N (wid Sharon M) r 200 S Catalina Av
Booth B Forrest (Julia) city police h 315 S Francisca Av
Booth Julia B r 315 S Francisca Av
Boren Noble (Myrtle) plasterer h 520 N Gertruda Av
Borges Joe (Luisa) prop Spanish Cafe h 310 Beryl
Borges Manuel S mgr Spanish Cafe r 310 Beryl
Bosch Sidney J concessn 143 N El Paseo r 117 S Guadalupe Av
Bosence Richd J r rear 506 N Broadway
Bosette Richd artist h 506½ N Broadway
Bostick Geo oil wkr h 209½ N Elena Av
Bougamont Chas (Helena) (Barriat & Bougamont) h 406 S Catalina Av
Bougamont Chas Jr clk Barriat & Bougamont r 406 S Catalina Av
Bourchier Alfred H (Emily A) h 522 S Guadalupe Av
— Bowen Clarence T (May) carp h 233 S Irena Av
Bowers Wm emp Redondo Planing Mill r 114½ N Pacific Av
✕ Bowling Eaton M (Celeste A) telegr L A h 206 N Juanita Av
✕ Bowman Arthur W (Mildred E) lino opr L A h 224 N Catalina Av
Bowman John A (Mary B) elec P E Rv h 105 S Maria Av
Bowman Leroy J lino opr Breeze res Hermosa
Bowman Millard E (Neva) (Wardrobe Cleaners & Dyers) h 136-B S Broadway
Bowman Wm H (Sudie M) stillmn S O Co h 419 S Broadway
✕ Bowman Wm H Jr (Lucille E) oil inspr S O r 630 Esplanade
Bownet Rose B (wid Emanuel) h 113 S Irena Av
Bowring Chas C driver r 708 N Irena Av
Bowring Fredk S elec h 708 N Irena Av
✕ Bowring Libbie (wid Jos) r 708 N Irena Av
Boyce Almon E (Martha J) firemn h 412 S Francisca Av
Boyce Cassius H welder r 412 S Francisca Av
Boyce Douglas A oil wkr r 412 S Francisca Av
Boyd Frank r 308 S Francisca Av
— Boyd John (Susan C) reprmn Edison St Plt h 300½ 11th

220 Learey E S baker
Safeway Stores Inc
Myers H C fruits
Trowbridge Cash Market
221-23 Cates Geo undertaker
ns M E Church
North Catalina Av intersects
300 Turner A S grocer
304 Meacham H D real est
306 Ayres A W shoe repr
306½ Wallace J F
308 Harris W J
309 Luther Jack
310 Johnson Carel
315 Collins G W autos
321 Diamond Apts
323 Hodges J O furn
327 Redondo Transfer & Stor
329 Costley-Newman Paint Co
Broadway intersects
400 Parisian Dye Wks
412 Jeffries & Meek autos
Elena Av intersects
Camino Real intersects
ss Union High School
Francisca Av intersects
601 Morrison E J
607 Vacant
615 Redd E S Mrs
616 Rowe J H
Gertruda Av begins
625 Blatter E G
Guadalupe Av intersects
711 Hickman Joseph
713 Starck J A grocer
Helberta Av intersects
801 King J M
805 Vacant
807 Vacant
815 Vacant
Irena Av intersects
907 Robertson B A
913 Vacant
Juanita Av intersects
Huntington St intersects
1011 Cassingham Wm
1019 Dooley D V

EIGHTH ST, East from Strand
1 blk n Seventh St
309 Brady Anna M

EL PASEO—NORTH, North from Emerald St
101 Redondo Sweet Shop
103 Moonstone Bowling Acmy
105 Shriner's Cafe
107 Gould F F concession
109 Hippodrome
111 Burall C R concession
113 Paseo Confy
117 Hoover Cafe
119 Shipman Ed concession
120 Lamberson B G concession
120½ Ebnet John concession
121 Redondo Fish Co
123 Old Mill concession
125 Redondo Shooting Gallery
127 Palace Grill
129 Didie Herman concession
129½ Clark M E Mrs concssn
Cozy Corner Lunchery
131 Dodge 'em concession
Midway begins
133 P & L Lunch
137 Lee's Lunch
141 Giant Dipper
141½ Clark A B concession
143 Lee Louis concession
151 Lee Louis

EL PASEO—SOUTH, South from Emerald St
101 Redondo Bazaar
103 Old Dinty's Place, restrnt
105 Old Mission Ice C parlor
107 Willis Josephn Mrs concsn
109 Pavilion Cafe
111 Barriatt & Bougamont, bil
Pavilion Barber Shop
115 Redondo Gem Co
121 Olympia Ice Cream Parlor
122 Santa Fe Ry depot
W U Tel Co
125 Speero Cafe
127 Capitol Theatre
132 Vacant
133 Panton W E confectionery
135 Redondo Grill
137 Cholvin L J popcorn
138 Redondo Cafeteria
139 Bath House
142 American Cafeteria
201 Ocean View Cafe
205 Moore M H restaurant
209 Redondo Bazaar

EL REDONDO—EAST, East from N Guadalupe Av to Garnsey St 1 blk n of Emerald
201 Carson A M Mrs
203 Kitchen J H
207 Burt W B

208 Vacant
211 Vacant
213 Hernandez Ygnacio
217 Dyer Willard
227 Root R W
228 Pearson Bernard
229 Guelff Fernand
230 Goodrich E S Mrs
232 Keeley Chas
233 Vacant
234 Vacant
rear Connaughton John
239 Murphy J J
240 Vacant
Vincent St intersects
303 Crane F W
305 Klass A M Mrs
Lewis Ralph
311 Wagner M C
315 Brown Homer
317 Allen C F
319 Adkins W H
319a Hardin A L
319b Hardin C P
321 Hughes S P
Garnsey St begins

EL REDONDO—NORTH, North from Vincent St to Garnsey St 1 blk e of Elena
302 Woodman T H
304 Carter M L Mrs
306 Medlicott A H
306½ Woods Richard
308 Myers C F
312 Carter H B
314 West A E
316 Stevens G A
318 White A O
Thompson G E
320 Silver J N
N Francisca Av intersects
322 Cook L P Mrs
326 Richardson H F
Gertruda Av
330 Goossens Jos
335 Black I E
Guadalupe Av
337 Tinney C L
Black A B Mrs
339 Grace A L
327 Hearell Floyd
329 Buddenbrock C V
342 Salamunovich John
348 Cossul A D
350 Vacant
352 Mothershead Chas
400 Vacant
409 Harkins Wm
426 Beeson F M
432 Pittsford Joel
452 Vacant
Garnsey St begins

EL REDONDO—WEST, West from N Guadalupe Av to Vincent 1 blk n of Emerald St (west side)
121 Vacant
202 Morgan W R
202½ Hooper J B
203 Berlin L A Mrs
205 Geery F H grocer
205½ Deuel C C
207 Sutten J A
209 Geery F H
210 Vacant
211 Vacant
213 Buxton J G
214 Roberts Margaret Mrs
215 Brumter Harry
216 Gifford H L
217 Burke J W
Case G M
Kiracofe S W
219 Stine J P
220 Ellis C W
221 Hills H V
(East side)
200 Merrithew Mae Mrs
204 Peters M A Mrs
206 Taylor D M
208 Nagle W G
210 Rahm F F
214 Roberts J H
N Francisca Av
222 Coffland B F
224 Fowler M B
226 Usrey Mary Mrs
228 Creedon John
230 Supple J B
232 Byers D E
236 Gilman Nettie Mrs
Vincent St intersects

ELENA AV—NORTH, North from Emerald St 1 blk e Broadway
101 Central Grocery
106 Cavanah J H
107 Ferris W C
108 Clutter O T
108½ Griewe R E

Thomas John G (Margaret S) whol oil 128 S Helberta Av h same
Thomas Otto (Louise F) emp Edison Co h 424 S Bway
Thomas Ralph E clk Opal Pharmacy r 516 Garnet
Thomas Scott J (Vera C) slsmn h 232 Av E
Thomas Verena (wid Theo) h 710 S Catalina Av
Thomas Wm T (Rose A) emp P E Ry h 516 Garnet
Thompson Arthur L (Lorraine) slsmn Jefferis & Meek h 412 S Francisca Av
Thompson Chester O D (Alberta L) mech Jefferis & Meek h 303 N Gertruda Av
Thompson Dorothy E bkpr First Natl Bank res Manhattan
Thompson Florence M (wid Jesse) h 608 S Catalina Av
Thompson Hubert R clk Torrance r 224 N Juanita Av
Thompson Jas C emp Redondo Dye Works res Inglewood
Thompson Jos C (Hallie O) molder h 224 N Juanita Av
Thompson L F slsmn Patten & Davies Lbr Co res Lomita
Thompson Martha L (wid Walter) r 316 Emerald
Thompson Mary K (wid C C) r 303 N Gertruda Av
Thompson Raymond oil wkr r 126 S Sunset Ct
Thompson Theodore B h 519 Garnet
Thompson Wm E (Mary P) eng Edison Co h 209 N Catalina Av
Thompson Wm T (Mary E) real est 518 S Catalina Av h 518a S Catalina Av
Thorndale Stella H (wid H G) prop Pennsylvania Apts h 412½ N Bway
Thorne Edwd R (Mildred E) slsmn Zeller-Stiles Motors h 230 Av A
Thornhill John N carp h 717 S Catalina Av
Thorns Ada G Mrs librarian Christian Science Reading Room r 627 S Bway
Thorns Ernest W (Ada G) painter h 627 S Bway
Thornton Frances E Mrs clk P C Ridgley Co res Hermosa
Thorp J Howard (Alta) sewing mach 124 S Pacific h 324 S Elena Av
Thorp Thos F clk J H Thorp r 324 S Elena Av
Thralls Chas E emp Redondo Shooting Gallery r 217½ Emerald
Threlkeld D Glen driver r 109 N Catalina Av
Threlkeld John T (Edith R) h 109 N Catalina Av
Thurber Jay R (Elva F) carp h 219 Av B
Thurston Elmer (Rex) oil wkr h rear 122 N Benita Av
Thurston Glenn W (Annett) h 219 N Bway
Tibbets E Loretta dep City Clerk r 613 Esplanade
Tibbetts Harvey H oil wkr h 814 Jasper
Tibbetts Robt M oil wkr r 814 Jasper
Tiff Chas I lab St dept h 818 N Juanita Av
Tillman Willard W (Emma) oil wkr h 121 S Guadalupe Av
Timmons Frank P carp r 104 S Lucia Av
Timmons Harley N oil wkr r 239 N Juanita Av
Timmons Zela L Mrs slsmn r 104 S Lucia Av
Tinker Jennie P (wid Chas A) r 218 S Helberta Av
Tinney Clarence L (Elizabeth) lab h 337 N El Redondo
Tipton Fred millmn Redondo Planing Mill res Hawthorne
Titus Lyman (Hope E) oil wkr h 426 S Bway
Tomb Elliott H (Olive W) mach Torrance h 511 Carnelian
Tomita Rokychi (Shizuko) flower grower h 343 Anita
Tomkins John A (Lillian M) eng Torrance h 443 S Elena Av

TOMLINSON, OLIVER N., (Emma L.) Supt. Hermosa-Redondo Water Co., Redondo Improvement and Huntington-Redondo Co., h 1011 S. Catalina Av.
Tomlinson Walter N r 1011 S Catalina Av
Tonnesen Thos A. (Mildred L) (Tonnesen & Scanlon) h 707 N Irena
Tonnesen & Scanlon (T A Tonnesen H M Scanlon) props Moonstone Bowling Academy 103 N El Paseo
Tooly Lewis B (Alta A) restaurant 2005 Torrance Rd h same
Torrey Mary C (wid Ransom) h 521 S Camino Real
Tower Annie A Mrs h 625 Diamond
Tower Beryl A (Eva O) prop Tower Service Sta r 718 Esplanade
Tower Eulric J emp Edison Co r 720 N Irena Av
Tower Frank M (Icilda J) emp Edison Co h 720 N Irena Av
Tower Franklyn J (Laura E) phys 129 S Pacific Av h 114 Sapphire
Tower John M Jr r 625 Diamond
Tower Martha M h 205 N Bway
Tower Phillip floormn Pavilion res Hermosa
TOWER SERVICE STATION, B. A. Tower Prop Oils and Greases, Tires, Battery Service, 300 S. Catalina Av, cor Opal, Phone 2565.
Townsdin Vincent (Agnes L) slsmn Tenan & Boaz Inc h 220 Ave D
Tracy Mabel Mrs emp Mission Lndy res Lennox
Trankle Albt R slsmn C Ganahl Lbr Co r 712½ Vincent Park
Trankle John P (Vivian V) clk Patten & Davies Lbr Co h 135 S Elena Av
Trankle Mary S (wid Rudolph) h 712½b Vincent Park
Trau Cameron C (Helen) slsmn L A h 420 S Bway
Trau Edna H bkpr American Coml & Sav Bank r 420 S Bway
TRAVELERS INSURANCE CO., H. J. McNally & Son, Agts. American Bank Bldg.
Traynor Mary A Mrs h 628 Vincent Park
Traynor Wm h 110 S Helberta Av
Tremper Agust R oil wkr r 522 S Guadalupe Av
Tremper Edwd M (Agusta C) h 522 S Guadalupe Av
Trenberth Edwin (Margaret) h 238 S Elena Av
Trenberth Edwin H (Edna) sand and gravel h 729 Sapphire
Trenberth Jas E clk U O Co r 729 Sapphire
Tressler Earl W (Nannie A) elec Electricial Service Co h 636 Vincent Park
Triangle Hardware Co (E E Reid W H Michel J R Rohr) 216 Opal
Triangle Motor Co (J J Cooley Elmer Fern C A Witt) 602 N Pacific
Triangle Service Station C E Dorrington prop Opal nw cor Irena Av
Trickett Estelle A Mrs r 131 S Benita Av
Trickett Fredk E (Catherine) gen contr h 601 Sapphire
Trine Darrell O emp P E Ry h 805 N Juanita Av
Trine Stella S (wid W O) r 805 N Juanita Av
Trinity Mission Rev M J McCutcheon pastor 117 Commercial
Trogdon Vern E (Ida M) cement h 324 N Catalina Av
Troutman Wm W emp Louis Lee r 151 N El Paseo
Trowbridge Apts C M Trowbridge prop 603 S Catalina Av
Trowbridge Cash Markets C M Trowbridge prop 220 Opal 110 S Pacific Av 529 S Catalina Av and 220 Diamond
Trowbridge Cyril M (Ettna W) prop Trowbridge Cash Markets h 124 Sapphire
True Reyburne E mgr Giant Dipper res Venice

DIAMOND—Contd
206 Indiana Apartments
Carle Wm
Czuleger Chas
Hess N R Mrs
Howe J H
210 L & L Sales radio
Sunset Court
215 Greenberg David fruits
216 Dayton P W
217 Ruge E W shoe repr
219 Coury W T
Coury W T & Son clo clnrs
220 Kuver Nielund bakery
Monroe Helen Mrs fruits
Safeway Stores gro
Trowbridge C M meats
223 Cate Geo undtkr
Catalina av
300 Vacant
304 Meacham H D real est
306 Ayres A W shoe repr
306½ Witten A S
308 Vacant
309 Winters W A
310 Johnson Carel
315 Phillips J A Inc autos
321 **Diamond Apartments**
Hamlin Bert
Hemingway Opal
Ogilvie Marjorie E
Phelps Grace E
Sherman I M Mrs
Southwick W D
323-25 Hodges Furniture Store
327 Redondo Transfer & Storage Co
329 Vacant
Broadway
400 Parisian Dye Works
Coury H A
412-22 Jefferis & Meek autos
Elena av
se cor Redondo Union High Sch
Camino Real
Francisca av
601 Reed F C
615 Redd E S Mrs
616 Quigley J J
Gertruda av begins
625 Tower J M
Guadalupe av
709 Hanger A G
711 Hickman M E Mrs
713 Storck J A gro
Helberta av
801 King J M
807 Huhn A J Mrs
815 Whitchurch I R
Irena av
907 Vacant
913 Walker Edgar
Junita av
Huntington
1011 Vacant
1019 Dooley D V

DOMINGUEZ—East from Ripley av 1 south of Spreckels

EARL—South from Huntington to Redondo-Torrance Blvd 4 east of City Limits
se cor Emerald Altobelli Adamo
ws 1 s of Emerald Vacant
ws 1 s of Huntington Oriental
es 1 s of Huntington Vacant
ws 1 s of Spencer Vacant

EIGHTH—East from Strand 1 blk north of Seventh
309 Brady Anna M

EL PASEO, N—North from Emerald
101 Shonafelt P B confy
103 **Tonnesen & Scanlon bowling alley**
105 Peterson Bros restr
111 Burall C R concessionaire
Burall S A Mrs clairvoyant
113 Ebnet John confy
115 Hoover V S restr
119 Ebnet John confy
121 Redondo Fish Co
123 Panton W E confy
125 Strange F E shooting gallery
127 Prodan Tony restr
129 James Wm restr
129½ Vacant
131 Dodge 'Em concession
Midway begins
133 Lenz Adolph restr
137 Vacant
141 Giant Dipper
Redondo Beach Boosters Assn
Wright Boudon Mrs art gds
141½ Vacant

143 Bosch Sidney restr
151 Clark A B
EL PASEO, S—South from Emerald
101 Walters F H sporting gds
103 Amati Armando restr
105 Old Mission Ice Cream Parlor
107 Willis Josephine Mrs beverages
109 Clark Edw restr
111 Barriat & Bougamont billiards
Pavilion Auditorium
Redondo Beach Dance Pavilion
Rockwell M G Mrs dancing tchr
Williams W M barber
115 Winn H W concessionaire
121 Stamas J E confy
122 Santa Fe Ry depot
Western Union Telegraph Co
125 Biocina Spiro restr
127 Capitol Theatre
132 McFarland Isabelle Mrs cafeteria
133 Biocina Spiro restr
135 Redondo Grill
137 Cholvin L J pop corn
139 Ogilvie Marjorie E beauty parlor
Redondo Beach Bath House
141 Sherman & Schuman confy
143 Alverson M H restr
201 Hand J M restr
205 Moore M H restr
209 Walters F H sporting gds

EL REDONDO, E—East from N Guadalupe av to Garnsey 1 blk north of Emerald
201 Carson A M Mrs
203 Kitchen J H
207 Burt W B
208 Vacant
211 Vacant
213 Hernandez Ygnacio
217 Vacant
227 McNutt W B
228 Pearson Bernard
229 Guelff Fernand
230 Goodrich E S Mrs
232 Keeley Chas
233 Burkett M S
234 Vacant
rear Connaughton John
237 Lawlor Frank
238 Vacant
239 Murphy J J
Vincent
303 Crane F W bldg contr
305 Klaas A M Mrs
Lewis Ralph
311 Wagner M C Mrs
315 Morris M M Mrs
317 Parsons R A
319 Hardin C P
319b Hardin A L
321 Vacant
Garnsey begins

EL REDONDO, N—North from Vincent to Garnsey 1 blk east of Elena
213 Buxton J G
302 Woodman T H
304 Fowler M B
306 Woods Richd
306½ Carson Louis
308 Medlicott A H
312 Black A A
314 Vacant
316 Vacant
318 Arcq J B
318a Parker J R
320 Silver J N
Francisca av
322 Cook L P Mrs
326 Richardson H F
Gertruda av
327 Colburn J R
329 Howard W A
Guadalupe av
337 Black A B Mrs
Irwin W T
339 Tibbetts R M
342 Salamunovich John
342½ Salamunovich Jos
344 Gossens Jos
348 Knox John
350 Bartsow Welch elect eng
352 Mothershead Chas
409 Harkins Wm
426 Gillette Chas
428 Aubry J A
432 Pittsford Joel
Garnsey begins

Tower John M (Anna A) janitor h625 Diamond
Tower John M jr gdnr r625 Diamond
Tower Margt E Mrs r625 Diamond
Tower Phil (Dorothy) h605 N Lucia av
TOWER SERVICE STATION, B A Tower Prop, Oils and Greases, Tires, Battery Service 300 S Catalina av cor Opal, Phone 2565
Townsdin Vincent (Agnes) sls mgr Robt Tenan Motor Cars h526 Sapphire
Towy Geo (Lillian) restr Gould la cor Vail av RD 1 box 532
Tracy Mabel lndrywkr Mission Lndry res Inglewood
Trankle Albert R driver h712b Vincent Park
Trankle John P (Vivian V) clk h135 S Elena av
Traynor Wm (Mary) rancher h Spencer nw cor Valerie
Tremberth Edwin (Margt) h238 S Elena av
Tremper Aug R oilwkr r522 S Guadalupe av
Tremper Edw M (Augusta) h522 S Guadalupe av
Tremper Vida E r522 S Guadalupe av
Trenberth Edwin H (Edna) sand and gravel 729 Sapphire
Trenberth Jas E clk r729 Sapphire
Tressler Earl W (Nannie A) electn h636 Vincent Park
Tressler Nannie A Mrs r636 Vincent Park
Trezise Reuben B (Irma) h310 N Gertrude av
Triangle Hardware Co (E E Reid, W H Michel, L H Morrell) 216 Opal
Triangle Service Station (F E, C E and C D Dorrington) junct of Opal, Jasper and Irena av
Troupp Gurnie dom 926 Esplanade
Trout Lafe tchr r630 Beryl
Trowbridge Apartments 603 S Catalina av
Trowbridge Cyril M (Ettna) meats 220 Opal 529 S Catalina av and 220 Diamond res Glendale
Truitt Pat mech Jefferis & Meek r110½ N Pacific av
Trummer Charlotte sec Redondo Union High Sch r RD 1 box 463
Tucker Cyrus N (Bertie M) oilwkr h106 N Francisca av
Tucker Frank L (Peggy) gas sta 1702 Santa Fe
Tucker Jess C (Helen) mech Grundmann Service Garage h214 N Catalina av
Tufts Eliz Mrs clk Sou Cal Edison Co r317 Sapphire
Tufts Eliz C (wid J Q) h601 Esplanade
Tufts John h317 Sapphire
Tufts Kathleen M cashr r601 Esplanade
Tufts Theo boat opr r601 Esplanade
Turgeon Seraphin (Leda) h133 N Elena av
Turnbull Henry R h414 S Gertruda av
Turner Alf S (Susie) h rear 214 N Benita av
Turner Burt C mach r720J N Guadalupe av
TURNER CHARLIE H (Katherine M; Turner & Holden), h705 S Broadway
Turner Edw H (Kath) beverages 17 Diamond h314 S Francisca av
Turner Fredk h136B S Broadway
TURNER & HOLDEN (C H Turner, H A Holden), Props Reflex Printing Co, and Publishers Redondo Reflex and Advance 260 S Pacific av, Phone 1621
Turney Roy (Matie) h423½ N Broadway

Turnipseed Beulah B dispr Sou Cal Gas Co r614 N Guadalupe av
Turnipseed Furen phone opr r614 N Guadalupe av
Turnipseed Harold r614 N Guadalupe av
Turnipseed Otha (Grace S) slsmn h614 N Guadalupe av
Tuttle Alvin T (Alice J) h223 S Helberta av
Tuttle Ethel F r610 N Juanita av
Tuttle Melvin W (Eliz) h610 N Juanita av
Tweeddale John (Jeannette) h ns Redondo-Torrance Blvd 1 e of Henrietta
Twyman Josephine Mrs smstrs h326 S Elena av
Tyler Chas R (Mary R) blksmith h Vanderbilt av nw cor Mackay av
Tyler Edith I art gds 104 Wall h707 N Guadalupe av
Tyler H h221 S Guadalupe av
Tyler Mary H (wid K W) r707 N Guadalupe av
U S Long Distance Telephone Co 5 Arcade bldg
Udey Grace Mrs r Perry Grubbs
Ullrich F Mason pharm r515 S Catalina av
Ullrich Fred J (Cath S) pharm D & D Drug Co h515 S Catalina av
Ulmer Wm C (Rikka) lab h216 Beryl
Umstead Helen I bkpr First Natl Bank r408 Emerald
Umstead Kenneth r408 Emerald
Umstead Owen Rev (Belle) pastor First Congregational Church h408 Emerald
Umstead Ruth r408 Emerald
Underdown Don M (Eva M) h213½ N Lucia
Underwood Geo M (Ruth M) h227B S Lucia av
Underwood Judson L (Dolly) cabtmkr h910 Ynez
Union High School see Redondo Union High School
Usrey Josephine (wid Wm) h108 N Helberta av
Usrey Mary Mrs h226 W El Redondo
Utley Bernard C (Margt) slsmn S O Co h508 N Irene av
Vaccaro David (Alma) rancher h ws Victor 1 s of Spencer
Vail Apartments 408 S Catalina av
Valenzuela Blas h814 N Juanita av
Valenzuela Jos fishermn r231 N Irena av
Valenzuela Rosa r231 N Irena av
Valiant LeRoy G h229 S Helberta av
Valiant Nettie Mrs r229 S Helberta av
VanAuken Grace tchr City Sch h724 Vincent Park
Vance Franklin L h723 Sapphire
Vandegrift Fred J (Anna H) clk F M Gilbert h207 W El Redondo
Vanderburg Geo D h310½ S Francisca av
Vanderford Geo C (Clara) curios 6 Diamond h404 N Helberta av
VanDugteren Chester H sls mgr Jefferis & Meek h232 S Irena av
VanGorder Don R (Lyda E) eng h104 N Juanita av
VanHellen Chester H (Martha D) tchr Redondo Union High Sch h629 Emerald
VanHellen E Louise r629 Emerald
VanHorn Donald A timekpr r122 S Francisca av
VanHorn Geo W (Mary E) h122 S Francisca av
VanRyn Gysburtus (Theresa) fishermn h405 S Gertruda av
VanSina Frank A (Mildred) lab h306½ S Francisca av
VanTreese Wm O (Helen M) timekpr h720 Elvira av

CATALINA AV. SOUTH—Contd
1011 Tomlinson O N A (o)
Av C intersects
1101 Burcell Harriet Mrs (o)
Av D intersects
200 Bonser Nellie Mrs
Payton F E Mrs
Rhodes S F Mrs (o)
1200½ Kistler W W
Av E intersects
1310 Kiracofe S W
Av F intersects
Av G intersects
1501 Vacant
Av H intersects
1601 Von Breton Therese (o)
1611 Attebery D C gas sta
Gregory Jos auto repr
1704 Kroger J W gas sta

CENTRAL COURT—North from Emerald to Vincent, 1 n of Elena
209a Jensen Jos
209b Vacant
216 Crown L E
216½ Vacant
220 Vacant
224 Vacant

CLARK—East from Harper, 7 s of Gould la
1335 Dentch Geo (o)
1339 Muirhead Ralph
Stanford intersects
Goodman intersects
Steinhart av intersects
1407 Butters Wm
1546 Witt J E
Kruttschnitt intersects
1652 Orchard L F
1678 Jorgenson G A
Harkness intersects
1707 McSmith Jas
1731 Scrivens G A
1732 Thompson W T
1743 MacPherson M J (o)
1751 Powers R J (o)
1763 Volk M C (o)
1772 Argo Ross
1798 Smith D H
Flagler intersects
1908 MacDonald Gordon (o)
1911 Rash V H
1912 Smith G B
1923 McFarlane Patk
1924 Amey A E
Greene av intersects
2008 Vacant
2015 Vacant
2046 Laufenson W E (o)
Blossom intersects
Rindge intersects
Slauson intersects
2307 Parkhurst L C Mrs (o)
2308 Hosler Frank A (o)
2330 Cripe J L
Mackay intersects

COMMERCIAL—North from Emerald, 1 e of Pacific
107 Vacant
107½ Carlton Ella Mrs
109 Vacant
111 Vacant
113 Vacant
117 Vacant
118 Noblie John (o)
119 Telford A R shtmtlwkr
120 Cataldo Bernard (o)
122 Redondo Sheet Metal Works
124 Vacant
126 Vacant
128 Spruce Cleaners

DIAMOND—East from Pacific av, 1 n of Emerald
4 Aubry J A curios
El Paseo begins
Pacific av intersects
101 Pacific Electric Railway
Southern Pacific Co
102 Baumbach Building
El Ja Arms Hotel
Bandy F E
Baumbach L J Mrs
Carey Alice M
Claussen Coza Mrs
Cochrane G A
Ellyson Hermione
Jones Lillian
Loop Evelyn
McKenzie Florence
Northrup Anna Mrs
Scott Frances
Sprung Edna
104 Oberg O H dry gds
Commercial ends
109 Lastz Henry auto park
110 London's Department Store men's furngs
112 Hawker's Market
114 Ozuleger Chas hdw

115 Fox G E
Oliver H J
Youngblood May Mrs
116 Prudhomme N E cbtwks
117-119 Central Garage & Service Station
Potter & Son garage
118 Pippen J D
Pippen's Upholstery Shoppe
Benita av intersects
201 Golden West Market
201a Contreras Andw
Hess Goldie Mrs
201b Klawitter H H
203 Worl J T
206 Indiana Apartments
Adams Dorothy Mrs
Hess N R Mrs
Howe J H
Lerch J F ins
McCready J E
Reno Steph
Spencer Jennie Mrs
210 Idiart Peter baker
Sunset ct intersects
215 Giesler Insurance Agcy
Giesler M L Mrs realtor
Giesler Print Shop
215½ South Bay Creditors' Assn
216 Binker Daisy Mrs
217 McCaul B C barber
219 Coury W T (o)
Coury W T & Son clo clnrs
220 Safeway Stores Inc gro
223 Cate & O'Shea funeral directors
Catalina av intersects
300 Trenberth E H gro
302 Proctor D E meats
304 Jones Oscar barber
305 Longtin F J restr
306 Ayres A W shoe repr
306½ Witten A S
308 Kobarg F M
309 Treadwell H A
310 Waters N A
311 Longtin F J auto repr
315 Wiseman S A meats
321 Diamond Apartments
Pratt G A
Walton J A
Williams E L
327 Wilcox W P exp
329 Vacant
Broadway intersects
400 Coury H A clo clnr
412 Shelby R C real
412-422 Goodyear Service Sta
Jefferds & Meek arcs
Elena av intersects
Camino Real intersects
500 Redondo Union High School
Francisca av intersects
505 Hansen Carl conty
507 Vacant
601 Kiley L B Mrs conty
Kiley W J
607 Sherwin C D (o)
615 Vacant
616 Quigley J J
Gertrude av begins
625 Tower J M (o)
Guadalupe av intersects
709 Tuttle John (o)
711 Hickman Mae Mrs (o)
713 Storo E M Mrs (o)
Storo J A
Helbert av intersects
801 King J M (o)
807 Noel Rose Mrs
815 Vacant
Irena av intersects
907 Cox Adam (o)
913 Walker Edgar (o)
Juanita av intersects
Huntington intersects
1011 Ritchie Grace Mrs (o)
1019 Clotlaux R C

DIAMOND, WEST—West from Strand, 1 n of Emerald
101 Jean J L women's furngs
103 Fox Redondo Theatre
111 Vacant
112 Vacant
117 Nifty Lunch restr
Symonds Henry curios
125 Vacant
126 Pearl Hattie Mrs palmist

DOMINGUEZ—East from Ripley av, 1 s of Spreckels
3200 Howell Fred dairy

EARL—South from Huntington to Redondo-Torrance blvd, 4 e of city limits
se cor Emerald Altobelli Adama (o)
ws 1 s Emerald Posilas Natividad (o)

EIGHTH—East from Strand, 1 n of 7th
309 Brady Anna M (o)

CTORY CO'S

ar Military Academy h514

Catalina av
na av

av
Co r224 N Juanita av
s Angeles

lo
lupe av

son Co h1000 S Juanita av

talina av h518a do
r627 S Broadway

drs Exch h627 S Broadway
t av
s 126 S Pacific av h514 S

av
oadway
y

lo Theatre h225 N Irena av

S Francisca av
v

ngeles
Benita

ton-Redondo Co and Re-
h1011 S Catalina av
Elena av

7 N Irena av
Scanlon) bowling alley 103

cisca av

terials h310 S Benita av

Torrence Vaughan S (Ruby) h1715 Harriman
Torrey Mary C (wid Ransom) h521 S Camino Real
Touchon Faith M opr So Cal Tel Co r Los Angeles
Tovil Morris slsmn h105 Av B
Tower Beryl A (Eva O) real est 224 S-Pacific av h718 Esplanade
Tower John M (Annie A) jan h625 Diamond
Tower John M jr h625 Diamond
Tower Philip (Dorothy) supvr Mandarin Ball Room h605 N Lucia av
Tower Vincent H life guard Redondo Beach Bath House r625 Diamond
Towers Iselda (wid John) lndywkr Crown Lndy h1021 Paulina av
Towers Ulric J (Frances) welder h1019 Paulina av
Towne Hattie R (wid Clarence) h103 S Guadalupe av
Townsend Lillian maid 124 Sapphire
Towy Geo mgr Superior Bottle Cap Co r Inglewood
Tracy Mabel lndywkr Crown Lndy
Trade Stimulator Co F W Scudder mgr 200 S Pacific av R16
Trainor Mary Mrs r322 S Broadway
Trankle John P lab Patten & Davies Lbr Co h131b S Elena av
Traynor Wm rancher h es Valerie 1 s Huntington
Treadwell Harry A slsmn h309 Diamond
Tremper Edw M (Augusta) slsmn h522 S Guadalupe av
Trenbarth Albt h511 N Gertruda av
Trenberth Edwin (Margt A) h731 Sapphire
Trenberth Edwin H (Edna H) gro 300 Diamond h729 Sapphire
Trenberth Jas E clk r729 Sapphire
Tressler Earl W (Nannie A) electn h636 Vincent Park
TRIANGLE MOTOR SERVICE (C J E Hunt, L L Clark), Gas and Oil, Towing, Greasing and General Repairing, 630 Jasper, Tel 5019
Tribble Wm J h122½ S Benita av
Trimble John h2550 Gould la
Tripp Chas (Harriet) oilwkr h209 N Elena av
Trout Wm W (Emma) oilwkr h607 S Broadway
Trowbridge Chas D (Kath M) slsmn h308 Garnet
Troy Thos J (Nora) jan Redondo Beach Bath House h712 Vincent Park
Truesdale Ambrose J r600 Strand
Trumbell Walter C r519 Garnet
Trummer Charlotte sten High Sch h116 El Redondo
Tucker Fred C oilwkr r532 S Francisca av
Tucker Henry O lab r400 S Camino Real
Tufts Eliz C (wid J Q) h601 Esplanade
Tufts Eliz H clk So Cal Edison Co r321 Sapphire
Tufts John Q (Eliz) boatmn h321 Sapphire
Tufts Theo (Belle P) boatmn h512 S Elena av
Turgeon Seraphin h133 N Elena av
Turnbull Henry R h414 S Gertruda av
Turner Alf S agt Wichelo Hall h111½ S Catalina av
TURNER CHARLIE H (Katherine M), Mgr Reflex Printing Co, h705 S Broadway
Turner Edw (Kath) carp h639 Vincent Park
Turner Gretchen K r705 S Broadway
Turner Henry oilwkr h803 N Irena av
TURNER KATHERINE M MRS, Publisher Redondo Reflex, r705 S Broadway
Turner Margt G Mrs cook h603 S Catalina av
Turner Mary C (wid Peter) h104 S Helberta av
Turner Rowena Mrs h401 Av C

DIAMOND, EAST—Contd
206 Indiana Apartments
Bauman R W
Davis Mary Mrs
Dunham Robt
Goodchild I E Mrs
Hess N R Mrs
McCormick Mary Mrs
Oliver H J
Stewart Wm
210 Idiart Peter baker
Sunset ct intersects
215 Giesler Insurance Agcy
Giesler M L Mrs real est
Giesler Print Shop
215½ South Bay Creditors Assn
216 Tsunoda Shimasburo
217 McCaul B C barber
219 Coury W T & Son clo clnrs
219½ Coury W T (o)
220 Safeway Stores Inc gro
223 Allen R W funeral dir
Catalina av intersects
300 Trenberth E H gro
302 Proctor D E meats
304 Jones Oscar barber
306 Campeau Fern books
308 Vacant
310 McFarlane Jos
315 Hufford Machine Works
321 Diamond Apartments
Alford Anna Mrs
Clyde Thelma
Costley A H
Ketten F A
325 Pippen J D
Pippen's Upholstery & Furn Store
327 Wilcox W P exp
329 W P A Commisary
Broadway intersects
400 Coury H A clo clnr
412 Wade R B Mrs restr
412-22 Jefferis & Meek autos
Elena av intersects
Camino Real intersects
500 Redondo Union High School
505 Redmond C E Mrs confy
507 Vacant
515 Hamlin I J Mrs
Francisca av intersects
601 Boone W R gro
607 Kiley W J (o)
Gertruda av begins
625 Getter J D
Guadalupe av intersects
709 Marshall J S
711 Saffert W T
713 Jay B W gro (o)
907 Cox F A Mrs (o)
913 Walker Edgar (o)
Juanita av intersects
Huntington intersects
1011 Martin F B (o)
1019 Mahan P T
Lucia av intersects

DIAMOND, WEST — West from Strand 1 n of Emerald
101 Diamond Sweet Shop
103 Fox Redondo Theatre
104 Vacant
105-107 Veterans of Foreign Wars
109 Bowman E J gift shop
112 Vacant
113 Vacant
117 Aubry J A curios
126 Vacant

DOMINGUEZ — East from Hawley av 1 s of Spreckles

DUFOUR AV—East from Wilburn av, 2 s of Manhattan Beach blvd
1904 Ross Dave
1906 Lenz J G (o)
1907 Baker B F
Green la intersects
2021 Keller Chas (o)
Blossom la intersects
2101 Miles Orem (o)
Rindge la intersects

EARL — South from Hunting to Redondo-Torrance blvd of city limits
20800 Altobelli Loreta Mrs (o)
20901 Watts S E

ELENA AV, NORTH—North from Emerald 1 e of Broadway
101 Furuta Mac gro
107 Groslyn Jack
108 Clutter O T
108½ Vacant
109 Burke Leo
109½ Dailey Alice Mrs
110 Charolla John
111 Silvera E P
111½ Furuta Mac
112 Belcher John (o)
Finn Geo
114 Scott J P
Scott Jewell Mrs
115 Harking Wm (o)
116 Cox M E Mrs
118 Redondo Beach Council 1990 K of C
120 Scanlon B M Mrs (o)
130 St James Parochial School
131 Furry Mildred Mrs
Self Maude Mrs
133 Turgeon Saraphlin (o)
Vincent intersects
209 Evans Roy
209½ Vacant
211 Harden J R
215 Nelson E H
215½ Freier T K
219 Baynton W E (o)
Diamond intersects
Camino Real begins
Carnelian intersects
401 Gonzales M A (o)
403 Rodriguez Juan
405 Magana Peter
407 Vacant
407½ Sorenson Mary Mrs
409 Seifert B L (o)
411 Porter H E (o)
411½ Vacant
413 Goss Walter (o)
417 Areyan Alejo
417½ Parker Maude Mrs
419 Mendoza Eduvigis Mrs
421 Bowman L J
Bowman Press printers
423 Bloss Tina Mrs
425 Vacant
425½ Vacant
427 Vacant
430 Duarte Juan
Beryl intersects
502 Steig E J Mrs (o)
502½ Heady P D
503 Philip Ramon
Granados Galdino
504 Wiltse Earl
505 Gomez Calistro
506 Hill G E
506½ Lopez Eusebio
507 Garcia Odelon
508 Espinoza Marcos
509 Bassette Philip (o)
511 Wuchner Adolph
511½ Silsby Frank
512 Nevin Thos (o)
514 Brenner Edw
514a Miller R A
515 Prodan Tony (o)
516½ Day J D A
516 Cook A P
517 Taber L W Mrs
518 Kidman L R
519 Villagracia Antonio
520 Peterson C A
520½ Sheeter Emma Mrs
522 Porter Genevieve Mrs
524 Bass H C

ELENA AV, SOUTH—South from Emerald 1 e of Broadway
107 Heininger John
109 Cavender Maude Mrs
110 Central Elementary School
111 Farleigh J M
113 Binker Daisy Mrs
115 Willis E J
117 Daniels Frank (o)
123 Espinoza P S
125 Montinez Alberto
129 Glen W D
131 Kohler John
131b Vacant
131½ Prouty L S
135 Miller Floyd
135½ Vacant
137 Millan Ray
137½ Walker Geo (o)
139 Vitale Jas
141 Williams O E (o)
Garnet intersects
200 Geach N A Mrs real est
Geach W E
Tucker W B real est
201 Mills C A gro
203 Wilhelm A E
204 Vacant
205 MacDonald Gordon
206 Vigil C A
206a Morse Burton
209 Larson R A
209a Silvera Al
210 Harrison Harold
Woolven Harriet Mrs
210a Wishner Ida Mrs
212 Morrow M L Mrs
Rea E A
214 Norton Chas
214a Childworth Robt
216 Keaveny Jas
217 Chiposa Jas (o)
219 Maddux C C
219a Knouf Harold
219b Wheeler Leslie
220 Horton Nicholas
Nickell H E
Spencer Lizzie Mrs
rear Lowery John
222 Bonham E C
225 Bingaman Newton
226 Telford Eva M
227 Drummond J J
228 Allen Jas
229 Graf J A (o)
230 Palmer C H (o)
233 Greenless J C
234 Shannon Rose Mrs
235 McCarrell W W (o)

Garringer Sadie E (wid Simon) h407 N Bway
Garrison Morgan L (Mattie H) oilwkr h1702 Belmont la
Garrison Willie L (Mary E) oilwkr h1704 Belmont la
Gaston C Harold (Betty) slsmn h909 Carnelian
Gaston Chas W (Carrie A) h rear 909 Carnelian
Gaston Everett K (Caroline) (Monstad Bait & Tackle Co) h421 S Elena av
Gaston Harold slsmn South Bay Motors
Gates Geo P h528½ N Elena av
Gates Wm H (Besse E) ins agt h809 N Juanita av
Geach Edw (Florence) h137 N Bway
GEACH NELLIE A MRS, Real Estate, Insurance and Loans, 200 S Elena Av, Tel 3914
Geach Wm E (Nellie A) slsmn Protsch Optical Co h200 S Elena av
Geach Wm M (Gwendolyn M) coremkr h223 S Juanita av
Gee Clifard F h511 El Redondo
Gee G B h202½ S Catalina av
Geery Daisy O Mrs tchr Redondo Union High Sch r116 via Estrellita, Hollywood Rivera
Geery Eva J beauty opr r803 El Redondo
Geery Francis H (Annie L) gro 805 El Redondo h803 do
Geery Ruth tchr r803 El Redondo
Gelfuso Anna Mrs h121 N Benita av
Gelsdore Robt h707 N Irena av
Gensler Louis G (Minnie) liquors 218 N Benita av h229 N Catalina av
Gentle Colbert O (Marcella M) slsmn h2021 Grant la
Gentry F Geo steel wkr h234½ S Irena av
George Arth W pntr h108 S Irena av
George Chas J (Muriel Z) tile setter h2221 Huntington la
Gerow Lester (Fay) electn h204 S Catalina av
Geswender T h1103 Flagler
Getter Jos D (Lula A) slsmn h625 E Diamond
Getz John H (Anna) h3208 Wiseburn av
Gibbs Bessie Mrs h1435 Pier av
Gibson Arth slsmn h814 N Irena av
Gibson Collins P (Eunice B) clk h601a Garnet
Gibson Eug E (Mildred) clk Safeway Stores h326c N Catalina av
Gibson Jas E (Florence E) h1404 Palm la
Gibson Motor Parts Inc R L Stewart mgr 280 S Pacific av
Giegangack John (Maude) h2213 Mathews av
GIESLER INSURANCE AGENCY (Mrs M L Giesler) 215 E Diamond, Tel 3071 (See front cover)
GIESLER MARIAN L MRS (Giesler Insurance Agency)

GIESLER RALPH E (Giesler Print Shop) r515 Emerald
Giesler Wm F (Marian L) h515 Emerald
Gilhousen Arch A r501 Esplanade
Gill Edw servicemn E G Griffey r410½ N Bway
Gill Grant W (Rose) slsmn Redondo Gift Shop h126 S Benita av
Gill Rose Mrs mgr Redondo Gift Shop r126 S Benita av
Gill Roselynn r126 S Benita av
Gillette Wilmer H (Nellie E) fishermn h1710 Marshall Field la
Gilman Richd H h422 S Catalina av
Gilman Walter E clk G C Vanderford h rear 505 N Guadalupe av
Gilmore Eliz waiter Mrs A K Fensler r216 N Catalina av
Gilner Peter A h121 S Juanita av
Gilpatrick Frank R (Edith S) h621 S Bway
Girardin Frank J (Arra T) artist h324 N Francisca av
Gish Robt R rancher h5007 Torrance blvd
Gitt Lola E h419 S Guadalupe av
Glance Gilbert L (Marie) chemical opr h523 N Juanita av
Glass Claud E (Bess) lino opr Breeze Publishing Co h621 Emerald
Glass Roy (Carrie J) oiler h1918 Perry av
Glass Simon D (Ruth) h919 Emerald
Glaudel Geo (Marie) h400 N Helberta av
Gleason Elisabeth tchr h2612 Robinson
Glen Louis r129 S Elena av
Glen Wm D shoe shiner 102 N Pacific av h129 S Elena av
Glenn Leonard O (Irene) mach h2201 Nelson av
Glennan Forrest L (Zelma) carrier PO h102 S Juanita av
Glover Kath writer r626 Elvira av
Glushenko Andw M (Marie V) shoe repr 212 Torrance blvd h519 S Helberta av
Gobel Howard (Smith & Gobel) r423 Pearl
Gobolos Geo E carp h2210 Rindge la
Goddard Muriel r715 Esplanade
Goka Robt K (Mieva) amusements 115 N El Paso h134b S Bway
Goldberg Fannie (wid Frank) h122½ N Sunset ct
Golden West Market (Andw Contreras G B Hess) 201 E Diamond
Golding Geo B (Helen B) slsmn h2412 Ruhland av
Goldstone Dorothy r137 S Bway
Goldstone Fredk W (Sarah) h137 S Bway
Goldstone Robt W (May E) sail mkr h120 S Francisca av

CURTIS AV—Contd
2514 Smith Henry
2515 Vacant
2516 Rollins H E ⊙
2517 Mooney A R ⊙
2518 Smith H S ⊙
2521 Grantham R L
Felton la intersects
2600 Powell L G
2602 Messersmith Irland
2603 Cooper J M ⊙
2604 Fett J H ⊙
2607 McDowell J W
2610 Chastain A S ⊙
2612 Vacant
2613 Brabham R E ⊙
2615 McCarthy W C ⊙
2617 Delay F W ⊙
2620 Arnett K U
2622 Steuckrath L F ⊙
Perkins la intersects
2700 Vacant
2701 Brooks W G ⊙
2702 Vacant
2704 Cooke M E Mrs ⊙
2709 Ennis Madeline Mrs ⊙
Inglewood av intersects
DEL AMO BLVD (formerly Huntington)—East from city limits 3 m n of Torrance blvd
4016 Quinn L R dairy ⊙
4030 Quinn V R
4224 Gomes J C dairy
4300 Menezes J G ⊙
4434 Barcellos Manuel dairy
4724 Costa Ezequiel
6500 Norton J W
Henrietta intersects
DEWEY AV—Changed to Aviation blvd
DIAMOND, EAST—East from Pacific av, 1 m n of Emerald
El Paseo begins
102 El Ja Arms Hotel
Armstrong G W
Aumiller Ella Mrs
FitzGerald B H Mrs
FitzGerald H B
Gilbert O J
Martin Wm
Reese D J
Seltzer Harry
104 Lake E A Jwlr
Commercial intersects
114 Czuleger Chas hdw
116 Barry Geo
Holon Sam ⊙
McKinney E R
117 Redondo Lock & Key Shop
Holon Sam auto repr
Benita av intersects
201 Golden West Mkt
201a Contreras Andw ⊙
201b Patton J W
202 P & E Venetian Blind Co
203 Watts H W
206 Indiana Apartments
Hass Robt
Hess Bruce
Lo Presti M C
Lund Emma
Stewart Wm
210 Idiart Pete baker
Sunset ct intersects
215 Suter Otto dental sups
216 Greenlee A G ⊙
217 Lynch J P Coins
219 Coury W T & Son clothiers
219½ Coury W T ⊙
223 Hagler & Hoffman funeral home
Hagler D R
Hoffman A A
230 Howard E L auto repr
266 Boylston May Mrs
Catalina av intersects
300-02 Nicolaii Erapedes cafe
302½ Challen J D
305 Romo F J Mrs rests
306 Shipley E R Mrs books
308 Nixon E B
310 McFarlane Jos
315 Los Angeles County Dept Parks and Recreation
321 Diamond Apartments
Belden W A
Duffy F C
Fashbaugh Peter
Fitch J C
Markwell W E
Rivenburger Frank
Smith Margt Mrs
Stewart M M Mrs
Stringer Wm
325 Pippen's Furn Store
327 Ogilvie W T transfer
cor Bway Four Square Ch
Broadway intersects
400 Parisian Cl'nrs & Dyers
420 Sunset Venetian Co
Elena av intersects
Camino Real intersects
500 Redondo Union High

505 Vacant
507 Vacant
515 Lazzaro Nellie
Francisca av intersects
601 Doherty Michl
607 Kiley Lida Mrs ⊙
Gertruda av begins
615 Kiley E O ⊙
625 Owens H E ⊙
Guadalupe av intersects
709 Smith Ray
711 Saffer W T ⊙
713 Cox E L gro ⊙
Helberta av intersects
801 Fay Harold
807 Hall Camilla Mrs
809 Courtier E M
815 Parra Pete
Irena av intersects
907 Rios P G
913 Kent Rollie
915 Spry G H ⊙
Juanita av intersects
Huntington intersects
1011 Graves E F ⊙
1019 Smith F E ⊙
Lucia av intersects
DIAMOND, WEST—West from Strand 1 n of Emerald
103 Fox Redondo Theatre
105 Trackman Rose ladies' wear
1011 Lawson P W rests
1107 Community Hall
1109 Certified Office Equip Co
DIXON—South from Redondo Beach blvd, 1½ s of Gould la
701 King O G ⊙
DOMINGUEZ—East from Ripley, 1 s of Spreckles
DOW AV—South from Manhattan Beach blvd to Johnston av
1900 Thomas Gertrude Mrs ⊙
1902 O Brien E A ⊙
1904 Jaeger W H ⊙
1906 Franke J J ⊙
1907 Gitmed David ⊙
1908 Lange Oliver ⊙
1909 Greene H E ⊙
1910 Youngdahl C R ⊙
1911 Fernelius R C ⊙
1912 Martin R E ⊙
1913 Forlou F C ⊙
1914 Terrell C R ⊙
1915 Glaze D F ⊙
3020 DeRose V A ⊙
3022 Oliver Allen ⊙
3100 Vacant
3102 Penny J A ⊙
3104 Hite H E ⊙
3106 Culbertson Minn ⊙
3108 Coty Raymond ⊙
3200 Hoerlich C A ⊙
3202 McCollum W W ⊙
3204 Hinton A F ⊙
3206 Brandt C C ⊙
3300 Kindelberger C E ⊙
3306 Malleti W N ⊙
3308 Snowberger D M ⊙
3400 Mackay H L ⊙
3401 Roberts T W ⊙
3402 Morgan W M ⊙
3404 Mapes W L ⊙
3405 Bird W G ⊙
3406 Fletcher C ⊙
3407 Fleischer Louis ⊙
3408 Bronder Walter ⊙
3500 Cagley J M ⊙
3502 Binning Clem ⊙
DUFOUR AV—East from Aviation blvd, 2 s of Manhattan Beach blvd
1904 Vacant
1906 Roth H P
1907 Rae J M ⊙
Green la intersects
2006 Vacant
2016 Hopper Walter ⊙
2021 Keller Chas ⊙
Blossom la intersects
2101 Miles Orem ⊙
Bridge la intersects
EARL—South from Huntington to Redondo Terrace blvd, 4 e of city limits
20800 Altobelli Lorena Mrs ⊙
20905 Watts K E sail mfr
21005 Harris R M oil producer
ELECTRIC—East from Inglewood to Hawthorne av, 1 s of Redondo Beach blvd
ELENA AV, NORTH—North from Emerald 1 e of Broadway
101 Brandt G W Jr ⊙
103 Calloway Serv gas sta
105 Hammack W G rests
107 Siskind Andw
108 Auld V
108½ Scott Lottie Mrs
109 Burke Leo ⊙

Osburn Marian tchr Pub Sch h216 Av E
Osgood Henrietta M (wid S P) h rear 538 Av A
Osgood Saml M r rear 538 Av A
Osterhaus Marie (wid Alex) h313 S Guadalupe av
Ostermeier Wm H (Maude B) textile formn h403 S Lucia av
Ostgulen Louis r2700 Blossom la
Otly Charlotte Mrs h314b S Bway
O'Toole Ella Mrs h133c N Bway
Otten John F (Mary R) ship rigger h2210 Marshall Field la
Otto Chas H (Gladys F) pntr h614 Knob Hill av
Otto Lorenzo W (Winifred A) clk h610 S Elena av
Otto Oscar C r109 S Helberta av
Otto Perry J (Marie) lather h109 S Helberta av
Otto Robt B (Ruth) oilwkr h516 S Catalina av
Ovendale Myrtle (wid Herbt) h2614 Gates av
Overpeck Robt M (Alice) h623 N Lucia av
Overpeck Robt M jr (Eliz) acct h507 S Helberta av
Overson Edw W (Levina) h1728 Speyer la
Overson Frank E (Ritta) h1728 Speyer la
Overson John B (Virginia L) ins agt h1744 Speyer la
Overstreet Jas T (Johnnie J) carp formn h1102 Goodman av
Overton Ruth R tchr Pub Sch r Los Angeles
Owen Alonzo F (Marcella) chipper h217½ Emerald
Owen Alonzo T (Ester J) firemn h1703 Marshall Field la
Owen Frank M (Hazel) clk Safeway r2013 Nelson av
Owen Frank W mach r223 S Helberta av
Owen Hollis L (Edith) steelwkr h238 S Elena av
Owen Jas S stdt r238 S Elena av
Owen Lester N (Evelyn) aircrftwkr Douglas h2811 May av
Owen Mary r605b1 S Catalina av
Owen Melissa Mrs mgr Commercial Hotel r114½ N Pacific av
Owen Norma R r238 S Elena av
Owen Norman B (Emma A) toolmkr h223 S Helberta av
Owen Wm L (Melissa) asmblr h114½ N Pacific av
Owens Agnes M (wid W T) h118 S Benita av
Owens Alvin A (Jessie D) USA h400 S Francisca av
Owens Cath P Mrs bkpr South Bay Daily Breeze r221½ S Catalina av
Owens Elwin F (Stella B) carp h1805 Huntington la
Owens Harry E (Marjorie) custodian Pub Sch h625 Diamond
Owens Huntley T (Edith S) radio repr h530 Av B
Owens Jas C (Hazel D) shipydwkr h620 N Irena av
Owens John M (Venice) h609 Carnelian
Owens Mattie R tel opr Assoc Tel Co h810 N Irena av
Owens Saml cbtmkr r214 S Pacific av
Ozment Louise F (wid Jesse) h125 S Sunset ct
Ozmer Jos M (Louise C) constrwkr h4907 Torrance Blvd

Pacheco Blanche fctywkr r2206 Nelson av
Pacheco Felipa fctywkr r2117 Marshall Field la
Pacheco Jesus lab r2206 Nelson av
Pacheco Juan (Frances) h2206 Nelson av
Pacheco P h1612 Havemeyer la
Pacheco Thos L steelwkr r2117 Marshall Field la
Pacific Apartments B T Lamb mgr 416 Strand
Pacific Candy Shop (Andw P Stamas) 112½ S Pacific av
Pacific Crest Cemetery F A Day mgr Inglewood av nr Redondo Beach blvd
Pacific Electric Railway J C Rowan agt 288 S Pacific av
Pacific Motel Herman Wawer mgr 800 N Pacific av
Packard Wm E carp r2700 Voorhees av
Packer John (Emilia) tlr h412 Pearl
Paddack Evelyn W (wid A S) h114 S Irena av
Padgett Josephine M (wid Chas P) r1820 Huntington la
Paget Alfd (Velma Mae) h503 S Gertruda av
Page Richd barber 228 S Pacific av r410 S Lomita av
Page Wm W dr r2302 Redondo Beach blvd
Paige Chas W (Leone E) formn Metlox Mfg Co h2421 Vanderbilt la
Paine Alvin E (Winifred S) potterywkr r2112 Gates av
Paine Cora M Mrs h rear 737 Av C
Paine Eldrige G (Ester) h412½ N Bway
Paine Everett (Martha) h412 N Bway
Paine F Virgil (Virginia) constrwkr r2317 Grant av
Paine Jas B (Nelda) eng h1902 Clark la
Paine Lawrence L (Helen) h412 N Bway
Paine Nathan E (Ida) constrwkr h2317 Grant av
Paine Winifred S Mrs dec Metlox Mfg Co r2112 Gates av
Paines Donald (Josephine) h305 Emerald
Painter Irene B Mrs h116 S Sunset ct
Palma Agnes (wid Ferdinand) r216 Av A
Palmer Alpharetta (wid O H) h110 S Irena av
Palmer Dillivan L (Frances H) mach h733 Av C
Palmer Francis h1435 Pier av
Palmer Jack (Esther M) h619 El Redondo
Palmer John L (Alice M) crane opr h922½ Ynez av
Palmer Lute E dr r1713 Harriman la
Pannell Benj H (Alta L) carp h2114 Perry av
Pannell H C (Loretta M) stmftr h720h N Guadalupe av
Pantelides Alexandria clk h227 Av F
Pantelides Chris r227 Av F
Pantelides Sophie clk r227 Av F

CURTIS AV—Contd
2009 Shimp W E ©
2010 Burness O R
2011 Under constr
2012 Hilton H M © 2-8605
2013 Kinsman Douglas © 4-4418
2015 Taylor B E 2-8691
2017 Pedigo T N 4-6109
2018 Wurm Fred Jr ©
2019 Under constr
2020 Under constr
2021 Freeland H J © contr 4-4012
2022 Beal O H © 2-5413
Blossom la intersects
2100 Bonner J M ©
2102 Whitsett W H ©
2104 Under constr
2105 Uggen R R © 2-4011
2106 Fiscus W A © 4-4226
2108 Hull Irma R ©
2109 Rasmussen R L ©
2110 Under constr
2112 Under constr
2113 Brown M W © 4-4037
2114 Karoll Herbin
2115 Under constr
2116 Quinlan Stanley © 4-2103
2117 Under constr
2118 Giles R L © 4-7718
2119 Gettys Hildens M © 4-8441
2120 Martin J S © 4-5157
2121 Cobabe V L © 4-1457
2123 Pavicic M M Mrs ©
Rindge la intersects
2200 Sapo B A ©
2202 Burrowes J B ©
2203 Browne K H © 4-1976
rear Browne R B ©
2204 Obbards T W ©
2205 Stout J M © 4-0319
2206 Fritz J W © 4-1905
2208 Bornlie D J contr 4-2580
2209 Chandler A J © 2-3302
2210 Obbards H E © 4-6253
2211 Chandler Roof Co 2-3302
Chandler C A roofer 2-1310
2212 Walker J A © 2-1291
2213 Hendrix Burnice C F R 2-8801
2214 Trudell L F
2215 Leigh W P ©
2216 Stallings C G ©
2217 Gray D Y ©
2218 Webber Jos
2219 Thomas Gordon ©
2221 Schwimmer H H © 4-7769
2223 Kirk H D ©
2224 Vacant
2225 Shoemaker D L ©
2226 Walter R L © 4-2190
2227 Freeze R J © 2-1611
2228 Gosselin R L © 4-2984
2231 Harris L G Mrs ©
Vail av intersects
2301 Contreras Frank © 4-8250
2303 Contreras Antonio © 4-1658
2305 Kinney A M Mrs ©
2306 France K M © 4-3829
2307 Anderson L D ©
2308 Dobratz E F © 2-3238
2308½ Vacant
2309 Tyler I V Mrs © 2-1562
2310 Under constr
2311 Hansen H O ©
2314 Peterson H M © 2-5318
2315 Hoobyar R S Rev © 4-1449
Mackay la intersects
2401 Kerruish V R chinchilla farm 4-4162
2402 McClellan Eleanor Mrs ©

2414 Armstrong V M Mrs
2415 Smithers A J © 4-1475
2415½ Pearson D R 2-7717
2416 Gragg L O Mrs ©
2419 Kennedy Edw ©
2420 Johnson H W ©
2422 Clampitt E G Mrs © 4-8167
2423 No return
Phelan la intersects
2500 Under constr
2501 Landers M O © 4-6839
2502 Peterson J F ©
2510 Roberts G W © 4-4025
2512 Bond J W
2513 Small E O © 4-4212
2514 Rutledge A M Mrs © 4-4688
2515 Busch E W ©
2516 Godfrey E R ©
2517 Mooney A R © 4-4959
2518 Appel Peter © 4-6727
2519 Under constr
2521 Grantham J H © 4-2450
2521½ Ritter Lena Mrs
Felton la intersects
2600 Winn W M
2602 Kaufman D L Mrs
2603 Cooper J M © 4-4135
2604 Fett J H © 4-7410
2606 Vacant
2607 Tacquard H R © 4-4073
2609 Vacant
2610 Chastain A S
2612 DeLorey J F ©
2613 Brabham R E © 4-
2614 Under constr
2615 McCarthy W C © 2-8551
2616 Under constr
2617 Leibrecht J E ©
2618 Under constr
1619 Grover L A © 4-2401
2620 Franken S V © 4-0533
2621 Reid F E © 4-6765
2622 Steuckrath L R ©
2623 Westbrooks J H © 4-4435
Perkins la intersects
2700 Cooka J J © 2-6273
2701 No return
2702 Batson L W
2702½ Walls F C 4-3254
2704 Cooke G E © 2-8792
2705 Rader W B ©
2708 Baker E M ©
2709 No return
Inglewood av intersects
city limits

DEL AMO—Southeast from Diamond to city limits
(No houses)

DEL AMO BLVD—West from Hawthorne av to (Redondo Beach) city limits, 3 n of Torrance blvd
3400 Inglewood Farms Dairy 4-8971
3400 Voges R C
3404 Bos John
3406 Lindsey Virgil
3480 Colnbrook Dairy 2-5251
Kenyon H D
4016 Quinn Dairy 2-6803
Quinn L R ©
4030 Vaughn H M
Earl intersects
4224 VanDerEyk Case dairy
4300 Menezes J G ©
4434 Madrigal Winsealado
4434½ Sanchez Wm

DEL AMO BLVD—Contd
5500 Lynncrest Farms
Cates C W
Thompson Chas
Wright W L
Henrietta intersects
city limits

DIAMOND EAST—East from Pacific av to city limits, 1 s of Emerald
El Paseo begins
102 El Jal Arms Hotel 4-9529
104 Toomey Jane Mrs dramkr 4-2590
106 Frederic Al Photography 4-5141
Commercial ends
110-18 Redondo Trading Post hdw and hsehold appliances 2-5681
113 Baughman G E restr
115 Baughman G H
Liming J L
Benita av intersects
201 Golden West Mkt gro 2-3519
201a Contreras Andrew © 2-6547
201b Hughes Clyde 4-7872
202 P & E Venetian Blind Co 4-3109
203 Wallace J A 4-6469
206 Indiana Apartments
Hess Bruce ©
Lund Emma Mrs
Stewart Wm
210 Idlart Peter baker 2-3316
Sunset ct intersects
215 Cam-Lox Co sch sups
216 Greenleaf A G ©
217 Lynch J P Co ins 2-9969
United Credit Exch 4-6490
219 Coury W T & Son clo clns 2-3434
219½ Watkins James
223 Sherfey & Meyers funeral dirs 2-3771
Chambers R C
230 Howard F L radio repr 2-9687
Catalina av intersects
300-02 Diamond St Mkt gro 2-2777
302½ Ambris Felipe
305 Vacant
306 Vacant
308 Mora Simon 2-1612
310 Wiener Mollie Mrs books
316 L A County Dept of Parks and Recreation 2-3080
321 Diamond Apartments
Apartments:
1 Duffy E C
2 Hunley J R
3 Newcomb Agnes Mrs 4-7216
4 Wilson G R Mrs 2-2716
5 Mantz Wm
6 Riley Lillian Mrs
7 Baynton Walter
8 Anson Mary Mrs
9 Stewart M M Mrs
10 Markwell W E
Street continued
325 Redondo Van & Stge 2-3808
327-29 Aschbacher Verl massage
Sims L D chiropractor 2-3953
Broadway intersects
400 Parisian Clns & Tailors 2-6205
Pacific Coast hway intersects
500 Redondo Evening High Sch 2-1166
Francisca av intersects
601 Doherty Ellen Mrs © 2-8519

713 ... 4-8593
Helberta av intersects
801 ...
807 Anaya R E
809 Montoya G ...
815 Ambrose Salvador
Irena av intersects
907 ... 4-4980
913 Smith ... 4-4794
915 Darling R ...
919 Spry C H ... 4-2278
Del Amo begins
Juanita av intersects
1011 Graves F ... ©
1019 Smith F ... © 2-5118
Lucia av intersects
Maria av intersects
Paulina av intersects
Prospect av intersects
Harkness la begins
city limits

DIAMOND WEST—Southwest ... blk from 200 N Pacific av ... Emerald
101 LeFord's Paint & Wallpaper Store 2-6504
103 Fox Redondo Theatre 2-52..
105 Vacant
107 Vacant

DIXON—North from 1718 Ford av to Gould la
Carnegie la intersects
1700 Schneider Joseph ©
1704 McIntosh R E 2-3366
Saunders Emmitt 4-8368
Schneider J A © contr ...
1706 Hensley Glenn 2-3595
1707 Crusan F ... © 2-3655
1710 Hadden I E © 4-5258
1711 King O G ©
1712 Gage M ... © 4-1583
1715 Henderson J E ©
1718 Vacant
1719 Hauck G H
1720 Johnson A S © 2-8690
1723 Miller A V Mrs ©
1728 Davidson H M 2-2870
1729 Barnard R N © 4-4164
1731 Rogers I ...
1734 Olafsen H W © 4-9760
1735 Knight A W ©
1736 Dixon C P © 2-3314
1738 Harless Ronald
1742 Hutchison D E Mrs
1746 Hoppert M M Mrs © 4-...
1755 Gray W G © 4-5900
Gould la intersects

DOMINGUEZ—East from junction of Flagler la and Ripley av to junction of Inglewood av and 190th
Green la begins
Blossom la begins
Rindge la begins
Earle begins
Meyer la begins
2315 Golden West Riding Club Inc 4-9238
Martindale C G
Inglewood av begins
190th begins

DOW AV—North from Robinson to Manhattan Beach blvd
2808 Western Family Mkt Inc gro 2-48559
2808½ Daniels C W barber

Osterhaus Geo A r3335 Highland av Herm Bch
" Hans A (Lillian M) slsmn h3335 Highland av Herm Bch
Osterman Calla H (wid Elmer) r209 Paseo De Las Delicias Red Bch
" John F acct h209 Paseo De Las Delicias Red Bch
Osterode Glenn C (Betty) mach h1747 6th Man Bch
" John r1747 6th Man Bch
Ostgulen Louis (Cora) h2021 Robinson Red Bch
Ostrander Rex E (Martha R) carp Herman H Ulrich (HB) 2114 Belmont la Red Bch
O'Sullivan Michl R (Mary A) oilwkr Genl Pet Corp h1731 Wollacott Red Bch
" Regina (Hermosa Pet Shop) r1501 Golden av Herm Bch
Osweiler Lena Mrs (Fosters Old Fashion Freeze) (RB) r Torrance
Otis Ray D (Bernadine) fishermn h1723 Carver Red Bch
Otly Charlotte E Mrs h314b S Broadway Red Bch
O'Toole John P (Ann L) physco-therapist h636 9th Herm Bch
Otos Kenneth G (Helen I) refinery wkr Genl Pet Corp h3612 Palm av Man Bch
Ott Andrew (Ellen M) formn AiResearch Mfg Co (LA) h1913 Gates av Red Bch
" Lawrence D (Anna M) carp h3528 Laurel av Man Bch
" Richd C (Lucille G) slsmn h868 Calle De Arboles Red Bch
" Richd E (Margt S) h717 Crest dr Man Bch
Otten F (Mary R) custdn Grand View Sch (MB) h2210 Marshall Field la Red Bch
Otterman Anna K h357½ 30th Herm Bch
Otterness Melvin L (Lucille E) baker h1636 Ruhland av Man Bch
Otterson Marvin W (Loretta) mach Northrop Aircraft (Haw) h2213 Farrell av Red Bch
Otto Chas H (Gladys F) pntr h614 Knob Hill av Red Bch
" Joe P (Betty L) pilot Airlines h226 Larsson Man Bch
" Lorenzo W (Winifred A) clk SPCo h610 S Pacific Coast hway Red Bch
" Robt pumper SOCo r5500 Torrance blvd Red Bch
" Ruth R (wid R B) cash Cal Water Service Co (Red Bch) r614 S Broadway Red Bch
" Winifred A Mrs cafeteria asst Pier Avenue Sch (HB) r610 Pacific Coast hway Red Bch
Ottosen Perry E (Marilyn V) h1071 9th Herm Bch
Our Lady of Guadalupe Church Rev Anthony M Combra pastor 1234 5th Herm Bch
Ouren Oscar B (Eunice) mech Kendall Chev Co (RB) h309 Bayview dr Herm Bch
Ousterhage John r2004 Curtis av Red Bch
Outcalt Nellie M Mrs fcty wkr h2900½ Bay View dr Man Bch
Outcault Hugh S (Genevieve) auto repr h1713 Wendy way Man Bch
" Richd S (Doreen) slsmn h456 21st Man Bch
Outland Harry T (Ruth K) aircraft wkr h610 Knob Hill av Red Bch
Outzen Florence (wid Jesse R) h739 Bay View dr Herm Bch
Ovadia David (Sadie) lens grinder 1h604 Harkness Man Bch
Ovendale Myrtle (wid Herbert) h2614 Gates av Red Bch
Overall John W jr h236 The Strand Herm Bch
Overless Wm H h830 Cypress av Herm Bch
Overley Glenn G (Jacquelyn C) asmblr AiResearch Mfg Co (LA) h2416 Voorhees av Red Bch
Overman Emily D (wid Lynn) h220 7th Man Bch
" Ethel Mrs slswn Sally Shops r537b Esplanade Red Bch
" Jas S (Marjorie) slsmn h231c Av F Red Bch
Overmyer David C (Margt K) aircraftwkr Hughes (CC) h1704 Grant av Red Bch
Overpeck Alice Mrs (Cupp's Cafe) r4463 Redondo Beach blvd Red Bch
" Robt M (Alice P) h4463 Redondo Beach blvd Red Bch
" Robt M (Eliz) h136 Via Sego Red Bch
Overstreet Georgia R Mrs h2421 Huntington la Red Bch
" Guy E (Grace M) h1601 Prospect av Herm Bch
" Jas T (Johnnie J) h420 N Gertruda av Red Bch
Overton Billy J (Emily J) aircraftwkr h300 Calle De Andalucia Red Bch
Overturf Geo G (Lola P) aircraftwkr h1717 Curtis av Man Bch
Oviatt Keith F (Bernice M) eng Northrop (Haw) h1457 6th Man Bch
Ovington Alice N clk h225 30th pl Herm Bch

OWEN
" Chas N clo cln h225 13th Man Bch
" Clovis F (Willie) clk Safeway Stores (Red Bch) h826 20th Herm Bch
" Ellis P (Zelma P) h2805 Perkins la Red Bch
" Elvin F (Stella D) carp h1805 Huntington la Red Bch
" Florence S Mrs real est 911 Pacific Coast hway h1061b Loma dr Herm Bch
" Frank W (Margia V; N B Owen & Son) h1222 Owosso av Herm Bch
" Gordon r641 Av C Red Bch
" Herbert G (Frieda L) h400 S Guadalupe av Red Bch
" Hollis L (Anna S) clo prsr h225 S Juanita av Red Bch
" Humphrey (Paula F) reporter h120 Via Sevilla Red Bch
" Jas S (Elsie L) USA h910 Carnelia Red Bch
" John M (Fern E) aircraftwkr Douglas (ES) h560 33d Man Bch
" Lester N (Evelyn M) mach Douglas (ES) h2811 May av Red Bch
" Marilyn Mrs cafeteria asst Grand View Sch (Man Bch) r225 13th Man Bch
" Muriel Mrs tchr h641 Av C Red Bch
" N B & Son (Norman B and Frank W) mach 513 Cypress av
" Norman B (Emma A; N B & Son) (Herm Bch) h223 S Helberta av Red Bch
" Olive A (wid R E) h1445 Manhattan av Herm Bch
" Robt E (Leilan) USA r531 N Helberta av Red Bch
" Roger M r413 10th Man Bch
" Steph W (Ellen G) tchr h411 Longfellow av Herm Bch
" Theo E (Bernice W) aircraftwkr Douglas (SM) h2801 Faber Red Red Bch
" Wm L (Melissa J) h1901 Belmont la Red Bch
Owens Agnes M (wid Wm T) h118 S Benita av Red Bch
" Aurelle V Mrs clk h421 32d pl Man Bch
" Edna M h1830 Pacific Coast hway Herm Bch
" Edwin E (Margt E) aircraftwkr h2501 Ralston la Red Bch
" Fae A Mrs interviewer South Bay Emp & Nurses Registry r942 10th Herm Bch
" Floyd C (Flora E) h210 Via Los Altos Red Bch
" Geo ftcywkr r321 12th Man Bch
" H Dale (Dannie D) die fnshr Douglas (ES) h2206 Plant av Red Bch
" Harry E (Marjorie) custdn h625 E Diamond Red Bch
" Huntley T (Edith S; Owens Radio Service) h530 Av B Red Bch
" John M (Cath R) eng North American h3109 Walnut av Man Bch
" M Ruth opr Assoc Tel Co (Herm Bch) h810 N Irena av Red Bch
" Radio Service (Huntley T Owens) 1014 S Pacific Coast hway Red Bch
" Ralph E (Virginia) aircraftwkr h138 Via Colusa Red Bch
" Sid (Faye) mgr One Hundred & One Ranch Mkt r942 10th Herm Bch
" Wm (Wanda) lab h232a S Broadway Red Bch
Owings Edmund L (Lillian E) tst eng McCulloch Mtrs Corp (LA) h 259 31st Herm Bch
" Kenneth E (Alice M) aircraftwkr h1401 Faymont av Man Bch
Owl Drug Co Theo C Carrington mgr 314 Hermosa av Red Bch
Ozment Louise F (wid Jesse) r122½ S Sunset ct Red Bch
P & E Venetian Blind Co (Gerald P Priamos) mfrs 202 E Diamond Red Bch
Pabitzky Wm W (Marybelle) mtr rebudr h852 12th ct Man Bch
Pabst Patricia C Mrs slswn h1252 20th pl Herm Bch
" Paul J (Rose M) phys 1148 Highland av h409 3d Man Bch
Pace Cecile pntr Herman H Ulrich (Herm Bch) r703 Meyers la Red Bch
" Ira M (Marjoleine) aircraftwkr Douglas (ES) h1412 Palm dr Herm Bch
" Louise tchr Lincoln Sch r1716a Esplanade Red Bch

APPENDIX D:

Archaeological Site Survey Record

Ti: AN EVALUATION OF THE RESIDENTIAL STRUCTURE LOCATED AT 219 S. FRANCISCA AVENUE, CITY OF REDONDO BEACH, LOS ANGELES COUNTY, CALIFORNIA

Prepared for:

Ag: Michael Tumanjan
5533 Bayridge Road
Rancho Palos Verdes, CA 90275

Prepared by:

Fi: McKenna et al.
6008 Friends Avenue
Whittier, California 90601-3724
(562) 696-3852
(562) 693-4059 FAX

Au:
Author and Principal Investigator: Jeanette A. McKenna, MA, RPA

Job No. 07-02-07-668
Da: July 19, 2002

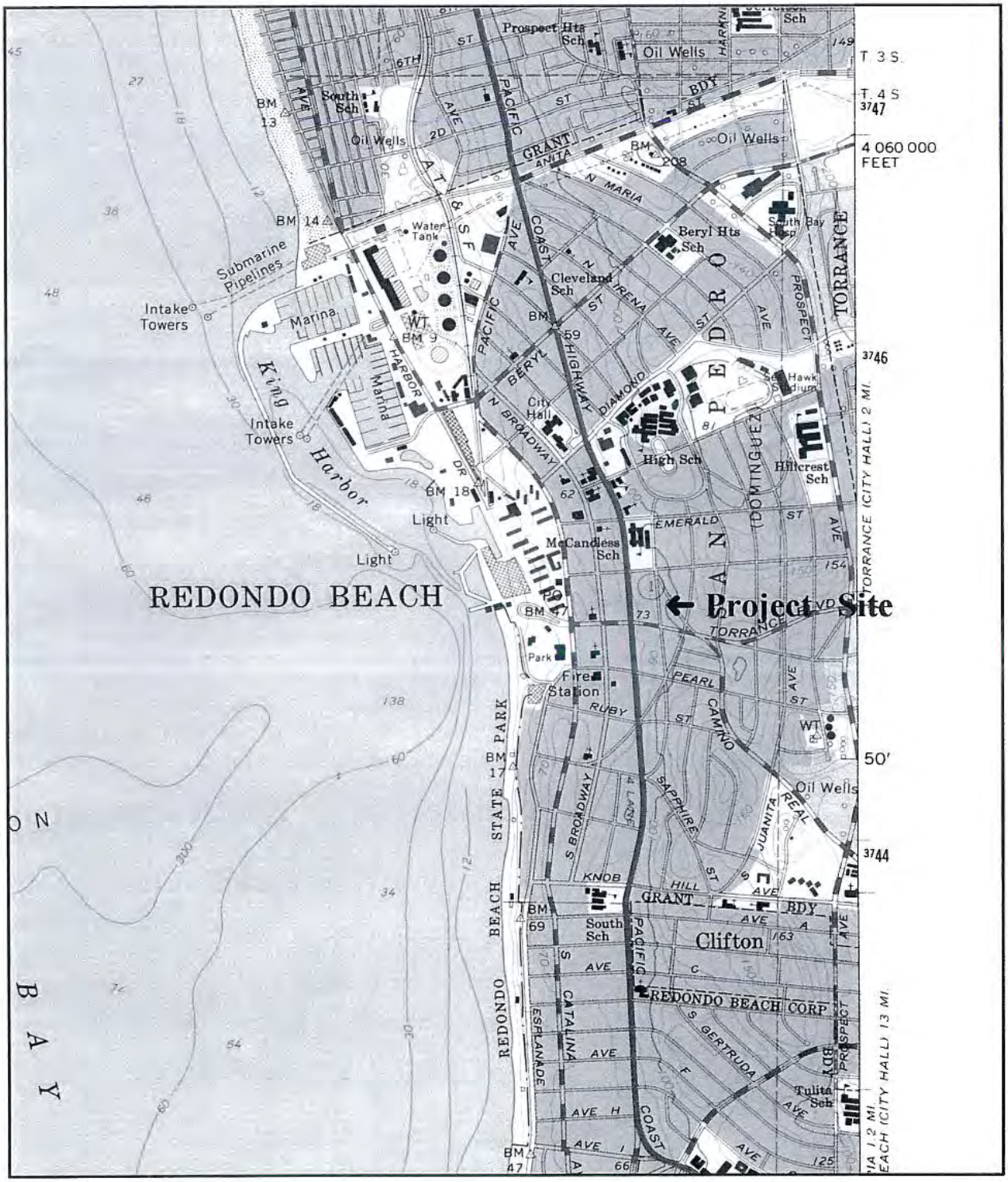


Figure 3. Specific Location of the Project Area (USGS Redondo Beach Quadrangle, rev. 1981.

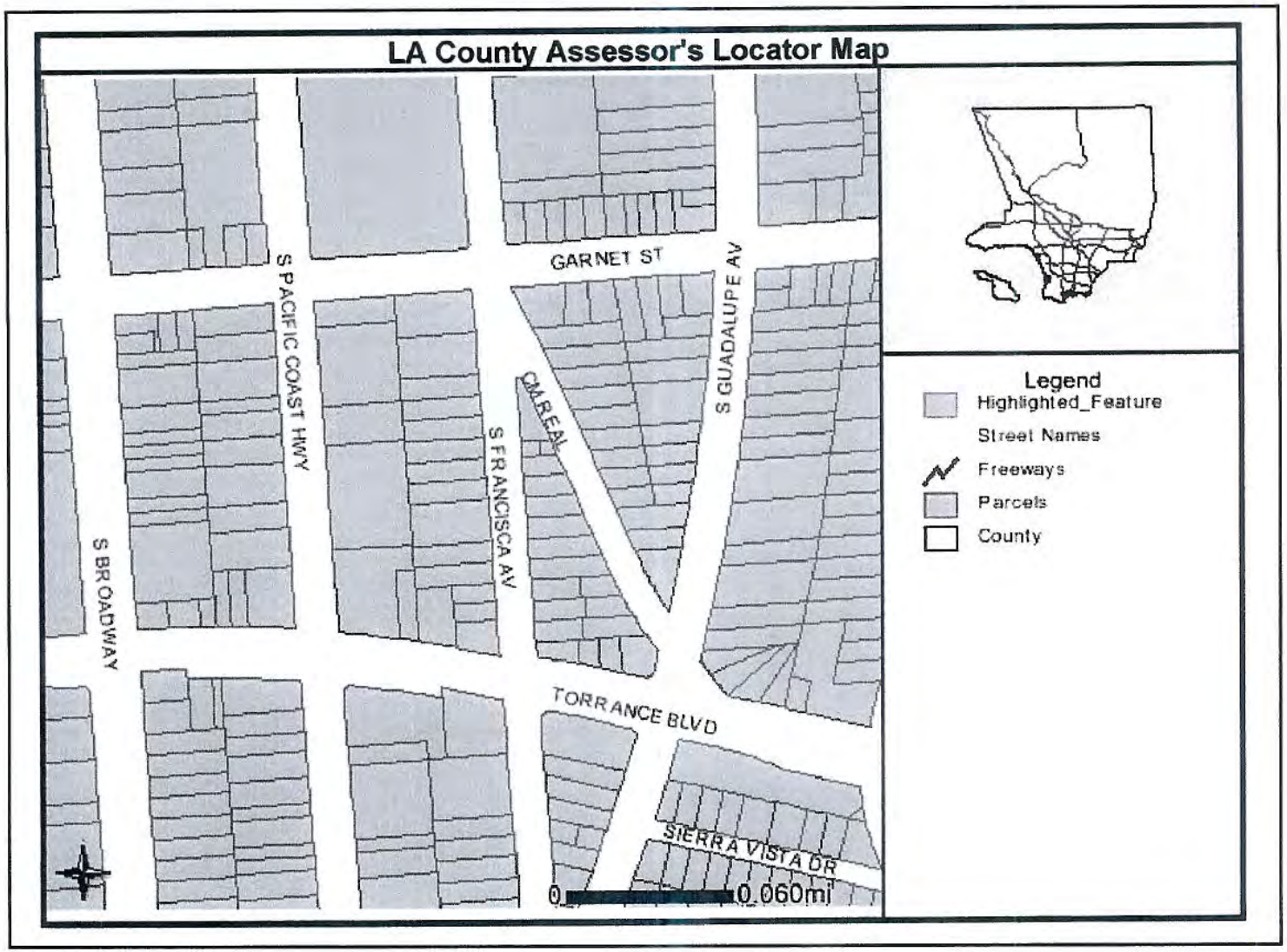


Figure 1. General Location of the Project Area.

AN EVALUATION OF THE RESIDENTIAL STRUCTURE LOCATED AT 219 S. FRANCISCA AVENUE, CITY OF REDONDO BEACH, LOS ANGELES COUNTY, CALIFORNIA

by,

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

INTRODUCTION

McKenna et al. initiated this evaluation of the property located at 219 S. Francisca Avenue in the City of Redondo Beach at the request of Michael Tumanjan, current owner of the property. Mr. Tumanjan was required to complete this evaluation as part of the process for obtaining a demolition permit from the City. Mr. Tumanjan proposes to redevelop the property by removing the existing residence and erecting a condominium complex adjacent to the existing complex located south of his property. McKenna et al. initiated these studies on July 12, 2002.

LOCATION AND SETTING

The Michael Tumanjan property is located at 219 S. Francisca Avenue, City of Redondo Beach, Los Angeles County, California (Figure 1). This property is cross-referenced as Assessor Parcel No. 7505-020-005 (Figure 2) and within Township 4 South, Range 14 West, Section 7 (Figure 3). This property is within the boundaries of the original Townsite of Redondo Beach and is bounded by Garnet Street to the north; Torrence Blvd. to the South, and Pacific Coast Highway to the west. The commercial structures of Pacific Coast Highway back-up to the property.

The property identified as 219 S. Francisca Avenue has been developed as a single family residence on a residential street. Over the years, many of the single family residences on this block (both the west and east sides of the street) have been removed and replaced by multi-family residential complexes. In this particular case, the frontage on Pacific Coast Highway has been completely re-developed with modern commercial structures and the property directly to the south of 219 S. Francicsa Avenue has been redeveloped as a condominium complex (ca. 1993).

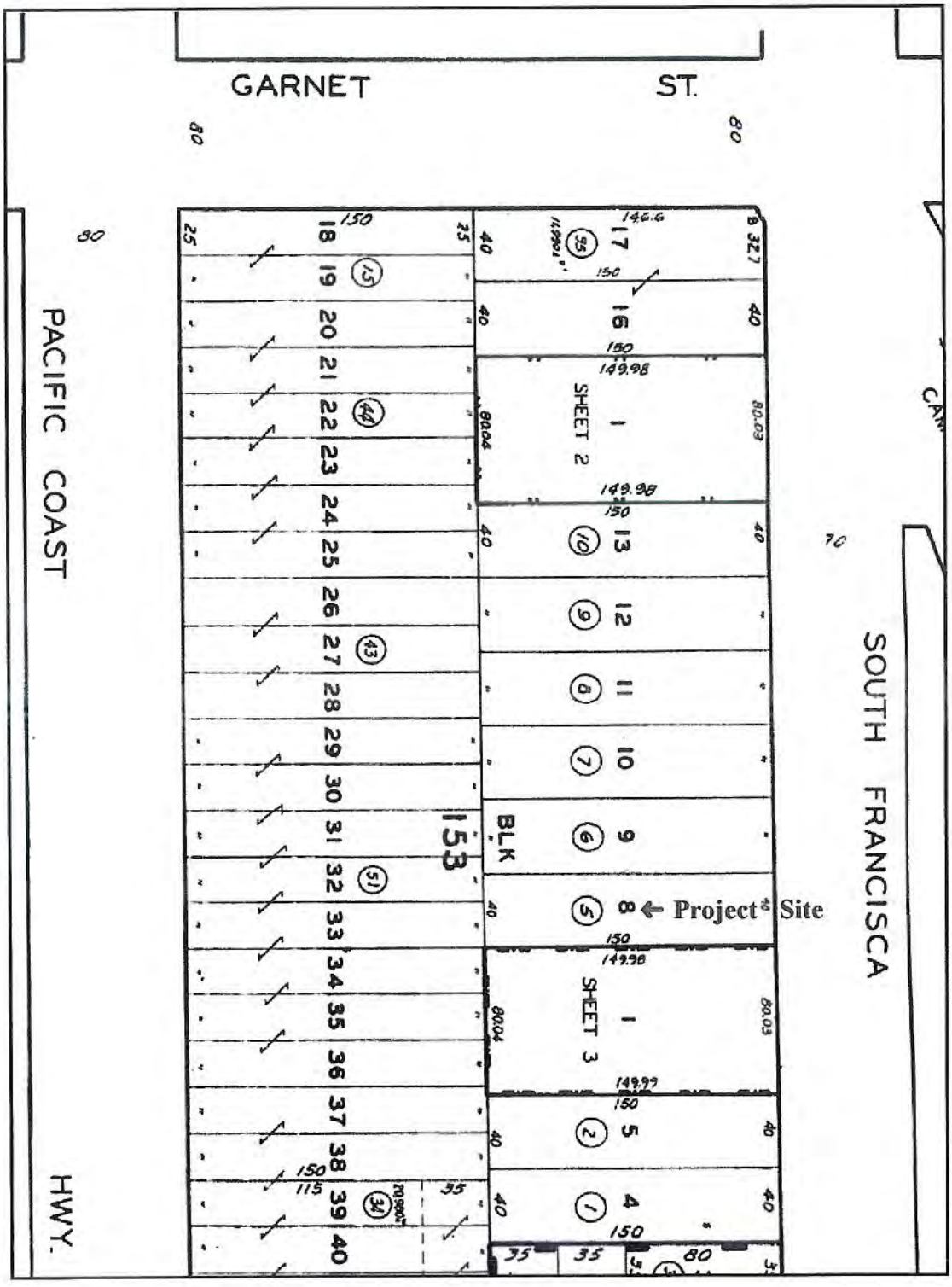


Figure 2. Assessor's Parcel Map Identifying the Property at 219 South Francisca Avenue, Redondo Beach.

Another condominium has been developed towards the north end of the block (ca. 1978), leaving five lots standard lots between 219 S. Francisca Avenue and the condominium complex to the north. A visit to this block resulted in the identification of recent redevelopment of some of these lots, resulting in the presence of only three single family residences between the current study area and the multi-family residences to the north.

A quick calculation of the area surrounding 219 S. Francisca Avenue showed that the four lots to the south of the residence have been redeveloped; of the nine lots to the north, six have been redeveloped; and of the east side of S. Francisca Avenue, there is a mixture of modern and historic residences (both single family and multifamily structures; see attached Photographic Record). Well over one half of the block consisting of structures facing S. Francisca Avenue have been replaced, resulting in a loss of any potential historic district in this immediate area.

219 S. FRANCISCA AVENUE - CURRENT CONDITIONS

According to City/County records, the residence at 219 S. Francisca Avenue was constructed in 1913. At the time of its development, the length of S. Francisca Avenue between Garnet Street and Torrence Blvd. was developed as a single family residential street with some commercial structure facing Torrence Blvd. at the south end of the street. The "footprint" for 219 S. Francisca Avenue is illustrated on the 1916 Sanborn Maps (Figure 4) and included the presence of the garage to the rear of the residence. The garage was cross-referenced as 219 ½ S. Francisca Avenue, indicating possible use of a portion of the garage as residential property.

The Sanborn maps identified the property as consisting of a single story residence (dwelling) with an irregular floor plan and an open porch spanning the entire front of the residence. The identification as a "dwelling" is indicative of a wood framed structure and the "dot" designation is indicative of a composition roof. There is an area of twelve feet between the residence and the property line, permitting access to the garage via a driveway from S. Francisca Avenue.

Data provided by the City of Redondo Beach Department of Planning confirmed that this residence was constructed in 1913 (Permit 659; 10-19-13) by owner S. Johns. In 1938, D.E. Byers (owner) obtained a permit for alterations (Permit No. 3471; 4-27-38). Visual inspection of the property in July of 2002 resulted in the identification of only one exterior alteration - the enclosing of the front porch area. The porch is now enclosed by four sets of sixteen pane fixed windows and a side entrance (south side).

The residence at 219 S. Francisca Avenue is a single family, single story building with a basement. The building rests on a concrete foundation with both vents and windows. A short set of concrete steps lead to the front door and porch - also presumed to be a concrete porch slab. The structure is wood framed and wood sided (clapboard siding) and double hung sash windows (1 over 1 panes) with "ears" indicative of the 1910s and 1920s window designs. There are some fixed windows and some of the sash windows have been replaced by aluminum or vinyl sliding windows (all in the rear of the building and not visible from the street).

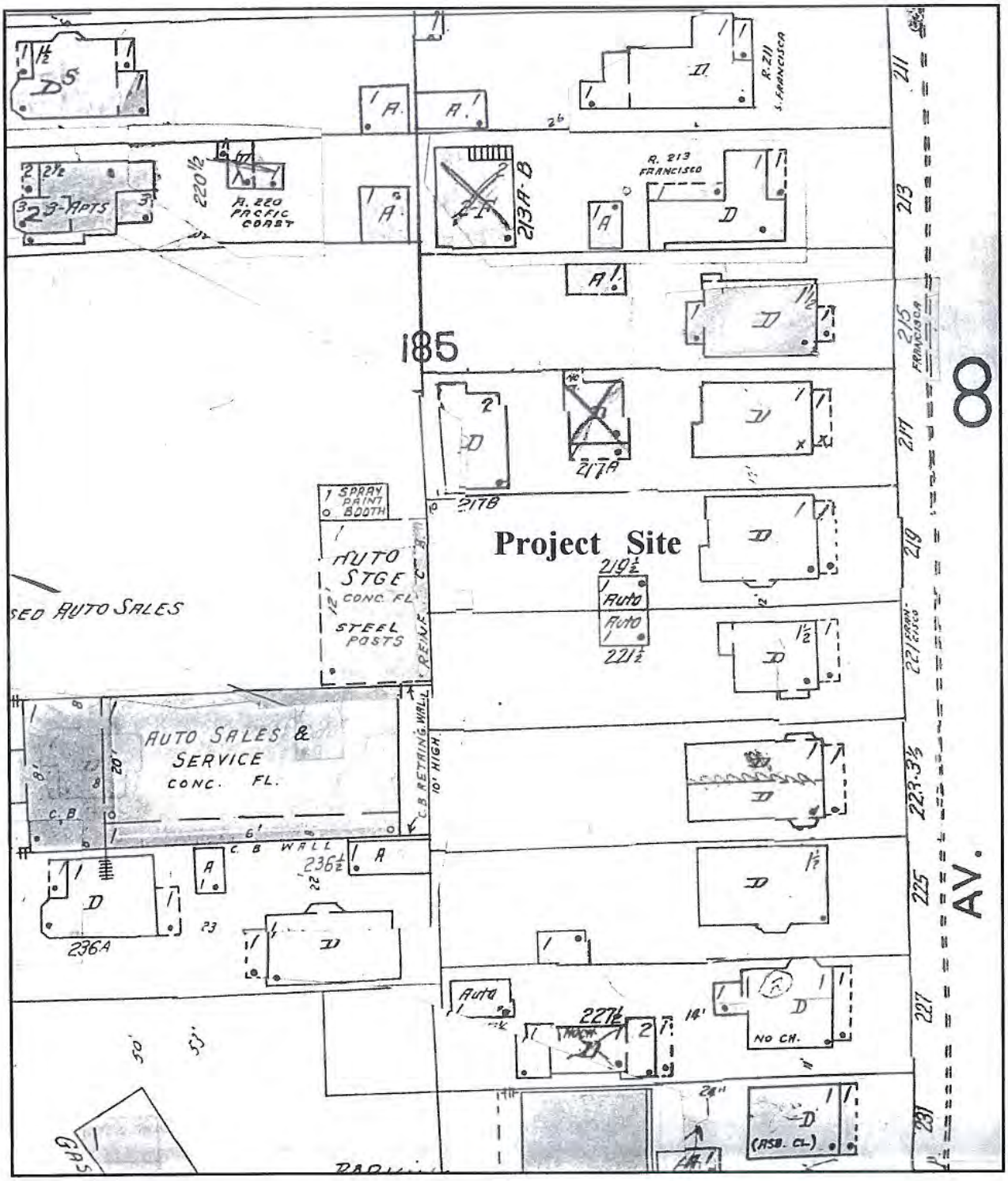


Figure 4. Sanborn Fire Insurance Map (ca. 1916, with overlays).

Each of the sash windows are framed with simple, 1" x 4" boards and standard window sills. The corners of the structure are also framed with 1" x 4" boards. Facia boards are flat and simple, as are the majority of the exposed eave beams. The exposed beams on the east elevation (facing S. Francisca Avenue) exhibit slight decorative elements (notched and reinforced beams supporting the roof over the porch). The door on the front porch is modern (recently replaced). A lattice air vent is present on the east elevation, as well.

The roof line is relatively low, exhibiting a gable roof with a pitch of approximately 25 degrees. A single brick chimney is evident on the south side of the structure, towards the rear, and appears to be an interior feature (no exterior structure on the south elevation).

A second entrance is located to the rear of the residence. In this case, the entrance is accessed from a small rear porch and staircase located above the entrance to the basement (see attached Photographic Record). A small enclosure has been added to this porch to support a storage area for picnic/BBQ materials. The water heater is located at the southeast corner of the structure (exterior), adjacent to the driveway area. A large tree shades the backyard and rear of the residence.

Overall, the residence is in good shape, well maintained, and with the exception of the enclosed from porch, exhibits the original 1910 construction design. **In general, this structure could be identified as a California Bungalow with some very slight "Craftsman-like" elements (e.g. slightly wider eaves and attic vents). This structure should not be considered a Craftsman.**

The garage associated with this property reflects a completely different mode of construction. In this case, the garage is identified as a board and batten structure with a shed roof; hinged doors, and in poor condition. This structure appears older than the residence and likely preceded it in construction. This structure is rectangular in shape - extending into the yard areas and exhibiting two roughly framed windows on the north elevation. A small segment of lattice work is located at the northwest corner of the structure, providing some decorative function. The size of this structure (approximately 18 to 20 feet deep by 12 feet wide) is slightly larger than the average 1920s era garage, indicating the rear of this structure may have served as a small living area (hence the additional address on the Sanborn Map). This structure rests on a concrete foundation, but the concrete flooring was apparently added at some later date (when the driveway was paved). It is possible that this structure served as the original residence while the more substantial residence was under construction.

HISTORIC CONTEXT

The structure located at 219 S. Francisca Avenue was built in 1913 (with the possibility that the garage structure was built earlier). Citing the "City of Redondo Beach Historic Context Statement" (1995), the year of construction falls within the period ranging from 1905 to 1923 and associated with the development of the Redondo Beach harbor (Duncan-Abrams and Milkovich 1995). Summarizing their discussion, and as presented by McKenna (1996:22-23), the context is as follows:

... the years immediately following the electrification of the Los Angeles and Redondo Railway were prosperous ones for the City of Redondo Beach. Since the port of Los Angeles was not yet complete, Redondo was still an important receiving bay for lumber and oil. Tourism continued to flourish, and industry was attracted to the community by an ambitious city promotion program ...

Redondo Beach owes its physical character and development patterns to the contributions of three separate real estate groups of community promoters ... Redondo Beach experienced a revival or reawakening in 1905 when electric rail magnate Henry E Huntington decided to invest in its future ... Huntington ... built upon the goals and dreams of ... earlier promoters and, with his virtually unlimited resources, was able to complete ... dreams of both a seaside resort and industrial port ...

On July 7, 1905, Huntington purchased the interests of the Redondo Beach Improvement Company and, just four days later, he purchased the Los Angeles and Redondo Railway. With these two purchases, he secured a foothold on the bay. Townspeople welcomed his investment reputation. For several days following the announcement of Huntington's investment in city property, the town was overwhelmed by buyers and sellers, each anxious to profit on Redondo Beach land ...

Other investors followed his lead. At least one opened large tracts of previously undeveloped land nearby and subdivided it for agricultural uses ... Within the original townsite, development continued as investors subdivided and/or developed, virtually completing the settlement of coastal Redondo Beach ... The final result was development of the region with diverse areas appealing to a variety of incoming residents.

Backtracking to the earlier development of the City of Redondo Beach, the original townsite was established in 1887 (incorporated in 1892) and within the historic Rancho Dominquez. Charles Silent purchased 1000 acres from the Dominquez family for the purpose of establishing a townsite. William Hammond Hall (California State Engineer) prepared the original site map for the townsite (McKenna 1996:13). Hall used historic names in identifying streets, including names associated with the Dominquez family (e.g. Francisca Avenue).

Redondo Beach was connected to the City of Los Angeles via the Santa Fe Railroad (ca. 1888). The light rail system (the Redondo Railway) was established by 1889. The Los Angeles and Redondo Railway also serviced the area in the 1890s and into the Twentieth Century. Edison completed their substation in Redondo Beach in 1910, providing the community with a local source of electric power.

Construction of single family homes continued into the 1910s and well though the 1920s, eventually resulting in the almost complete development within the original townsite. Redondo Beach boasted of a population of 5,000 in 1920 and another 15,000 residents by 1930.

SUMMARY OF PREVIOUS INVESTIGATIONS

In 1986, the City of Redondo Beach completed a survey of historic resources in the south Redondo Beach area. As noted in the survey report, the goal of the survey was to provide a comprehensive database of all resources; maximize the research effort for structures believed to be of historical importance; and to provide baseline data for the evaluation of the resources (with the main goal of preservation). A rating system was established (Categories A through D, respectively, with A representing significant resources and D having been deemed insignificant.

In addition to rating the structures, architectural styles were identified, including: Victorians (1885-1905); Colonial Revival or Neo-Classical Box designs (1900-1912); Cottages or Bungalows (ca. 1912-1940); Craftsman designs (1905-1920); Spanish Colonial Revivals (1910-1925); Period Revivals (1920-1940); and ca. 1940s tract homes (minimal traditional styles). The Cottages or Bungalows were described (see McKenna 1996:54) as follows:

> This category includes small, fairly unadorned houses, beach cottages and California bungalows. Exterior wall surfaces were covered with board and batten, clapboard or stucco. Most styles have large porches and utilize wood frame windows, either double hung or casement. While a large number of modest cottages And bungalows remain in Redondo, few of these were rated A or B.

As a result of the 1986 survey, approximately 1400 pre-1946 structures were identified in south Redondo Beach. A total of 28 were identified as "A" structures;129 were identified as "B" structures; 712 were identified as "C" structures; and 521 structures were identified as "D" structures. California Department of Parks and Recreation 523 Forms were completed for the "A" and "B" structures, only. Using the rating systems developed for the 1986 survey, the property located at 219 S. Francisca Avenue would have been identified as a "C" category structure - a building the retains the majority of its original design, but is "fairly modest" and less likely to be of historical importance. Such a structure could, however, be considered a contributing element of an historic district - assuming a district can be identified. This address is not specifically identified in the 1986 survey, but was subjected to a cursory evaluation during the investigations for an updated survey in 2001 (on file, McKenna et al., Whittier).

RESULTS OF THE CURRENT INVESTIGATIONS

The current research was undertaken to evaluate the structure at 219 S. Francisca Avenue, Redondo Beach, at the request of the owner, Michael Tumanjan. In applying the rating system adopted during the 1986 survey of the south Redondo Beach area, this structure is identified as a California Bungalow (Category C) reflecting its original design but of no historical significance. To adequately and fully address the potential significance of this structure, McKenna et al. all applied the basic criteria for importance/significance used by the State of California, which reads as follows:

15064.5. Determining the Significance of Impacts to Archeological and Historical Resources [new section as of November 1999]

(a) For purposes of this section, the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code§5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the

Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

With respect to the current property of concern, 219 S. Francisca Avenue does not meet the criteria presented in (A), (B), or (D), as presented above. There is a potential for the property to fulfill the requirements of Criterion (C). The property, while not meeting the requirements indicative of the "works of a master", an "important creative individual", nor exhibiting "high artistic values", it is one of the many examples of a type, period, region, or method of construction defined as the California Bungalow.

The California bungalow is found throughout Southern California and is indicative of a general and simple mode of construction indicative of the pre-Depression Era, but is not a rare type of structure nor a unique type of structure. In general, the conclusion reached by Thirtieth Street Architects in the 1986 report is consistent with identifying this residence an insignificant and not a contributing element of an identified district.

As noted earlier in this report, the redevelopment surrounding the property identified as 219 S. Francisca Avenue has effectively compromised any district in this particular area and the remaining historic structures on the block and few and far between. Many have been altered, most have been removed, and the remaining structures have lost their settings. The demolition of this structure would mean the loss of a single family residence, but would not result in the loss of a significant historic resource.

Jeanette A. McKenna, Principal, McKenna et al. Date

REFERENCES

City of Redondo Beach

2002 Planning Division (City Permits). On file, City of Redondo Beach, Los Angeles County, California.

County of Los Angeles

2002 County Assessor's Records. On file, County Assessor's Office, Los Angeles, Los Angeles County, California.

Duncan-Abrams, Marguerite and Barbara Milkovich

1995 City of Redondo Beach Historic Context Statement. On file, City of Redondo Beach Planning Division, Redondo Beach, California. (also on file, McKenna et al., Whittier, California)

Gianos, Theresa

2002 Personal Communication.

McKenna, Jeanette A.

1996 An Historic context Statement and Updated Historic Resources Survey for the City of Redondo Beach, Los Angeles County, California. On file, McKenna et al., Whittier, California.

Thirtieth Street Architects, Inc.

1986 Historic Resource Survey, City of Redondo Beach, July, 1986. On file, McKenna et al., Whittier, California.

APPENDIX A:

Professional Qualifications

JEANETTE A. McKENNA

Owner and Principal Investigator
McKenna et al., Whittier CA

Ms. McKenna specializes in the field of Cultural Resource Management: prehistoric archaeology, historic archaeology, and history. She is a recent-past member of the Board of Directors for the Society of Professional Archaeologists (SOPA 1993-97) and is certified by the Registry of Professional Archaeologists (RPA) to conduct both prehistoric and historic archaeological studies (1998-Present). Ms. McKenna has 25 years of professional experience as an archaeologist and has served on over 400 projects. The majority of her work has been conducted as a Field Director, Project Manager, and/or Principal Investigator in California and Arizona.

TECHNICAL CAPABILITIES

- Vast experience in the greater Southwest, Great Basin, and Southern California regions. Familiar with the full range of cultural resource investigations and has completed projects within the public and private sectors, including environmental management firms, planning and engineering firms, and State and federal agencies.
- Active in the discipline of Cultural Resource Management since 1976 with over 25 years of experience in Southern California and another 5+ years in Arizona, Nevada and Central and Northern California.
- Particular interest in the desert regions of California and Arizona, with specializations in the Proto-historic and Historic Contact Periods.
- Considerable experience in dealing with prehistoric cultural remains and working directly with Native American groups in archaeological training programs (through Arizona State University and the Southern California Indian Center, Garden Grove.

EDUCATION AND AFFILIATIONS

B.A., Anthropology, 1977, CSU Fullerton
M.A., Anthropology, 1982, CSU Fullerton
Lambda Alpha Lambda Honors Society
Post Graduate Studies, Arizona State University, 1982-85
Post Graduate Studies, History Department
University of California, Riverside, 1991-92
Certification Program: CEQA, Land Use and Environmental Planning, University of California, Riverside, 1997-98

Society of Professional Archaeologists (SOPA)/Registry of Professional Archaeologists (RPA) Certification: Field/ Prehistoric Archaeology and Historical Archaeology (1984 to Present)

Board of Directors, Society of Professional Archaeologists 1993-1997 (American Society of Conservation Archaeologists Representative)
BLM California Permit No. CA-99-01-031
BLM Arizona State Permit No. AZ-000107
Arizona State Museum Antiquities Permit (ASM 1997-72bl)

SELECTED PROJECT EXPERIENCE

- Historic Architectural Studies for Renovation and Restoration of the Greek Theatre, Los Angeles CA
- Evaluation of Cultural Resources within the Burbank and West Hollywood Redevelopment Project Areas, Los Angeles County, CA
- Historic Property Survey for the City of Whittier, Los Angeles County, CA.
- Archaeological Investigations and Resource Evaluations for the Proposed Cajon Pipeline, San Bernardino and Los Angeles Counties, CA
- Archaeological Class I Investigations for the Proposed Mojave Pipeline, San Bernardino County, CA
- Cultural Resources Investigations (Phases I, II, and III) for the RIX/SARI Projects, Santa Ana Watershed Project Authority (SAWPA), San Bernardino and Riverside Counties, CA
- Phase I, II, and III Archaeological Investigations for the County Sanitation Districts of Los Angeles County, Puente Hills Landfill Solid Waste Management Facility Expansion Project, Whittier, CA
- Archaeological Mitigation Program, The Phoenix Indian School Track Site Project. Arizona State University Office of Cultural Resource Management and the Bureau of Indian Affairs, Phoenix, AZ
- Archaeological and Testing Program for the Hidden Valley Golf Course and Van Buren Golf Course Properties, Riverside County, CA
- Cultural Resources Overview Studies for the Annexation of Unincorporated County Lands to the City of Ontario, CA
- Historic Property Survey Reports: Warner Bros. Main Lot Ranch Lot Properties, Burbank, CA
- Historic Archaeological Investigations for L.A. County Sheriff's Facility, Lancaster, CA.

APPENDIX B:

Photographic Record

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PHOTOGRAPHIC RECORD

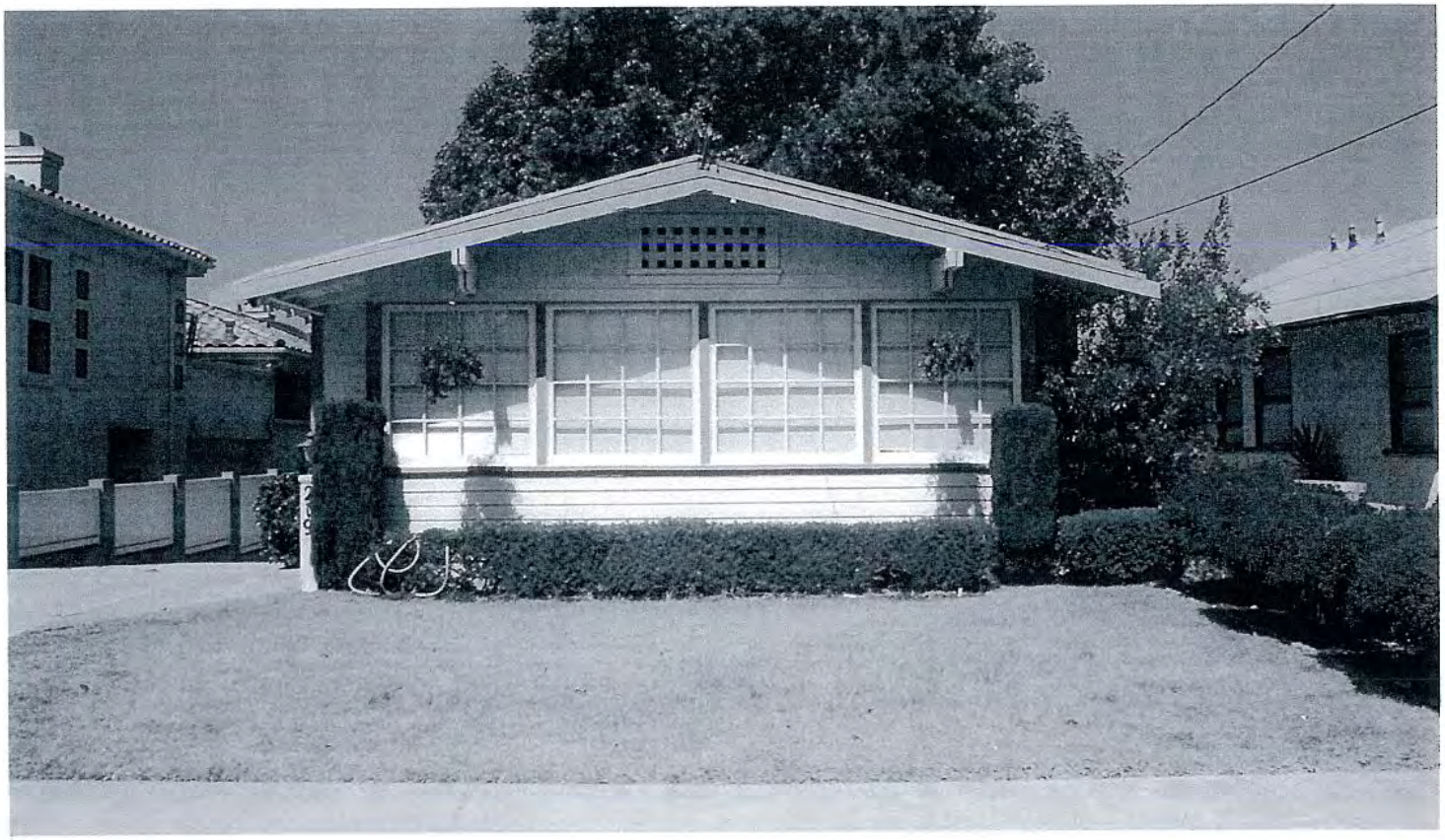
Primary # _____
HRI # _____
Trinomial _____

Page 1 of 1 Project Name or # (Assigned by the Recorder) 02.668 - Redondo Beach Year 2002
Camera Format: Digital Camera Lens Size: NA Roll No. 1
Film Type and Speed: NA File Kept At: McKenna et al., Whittier CA 90601

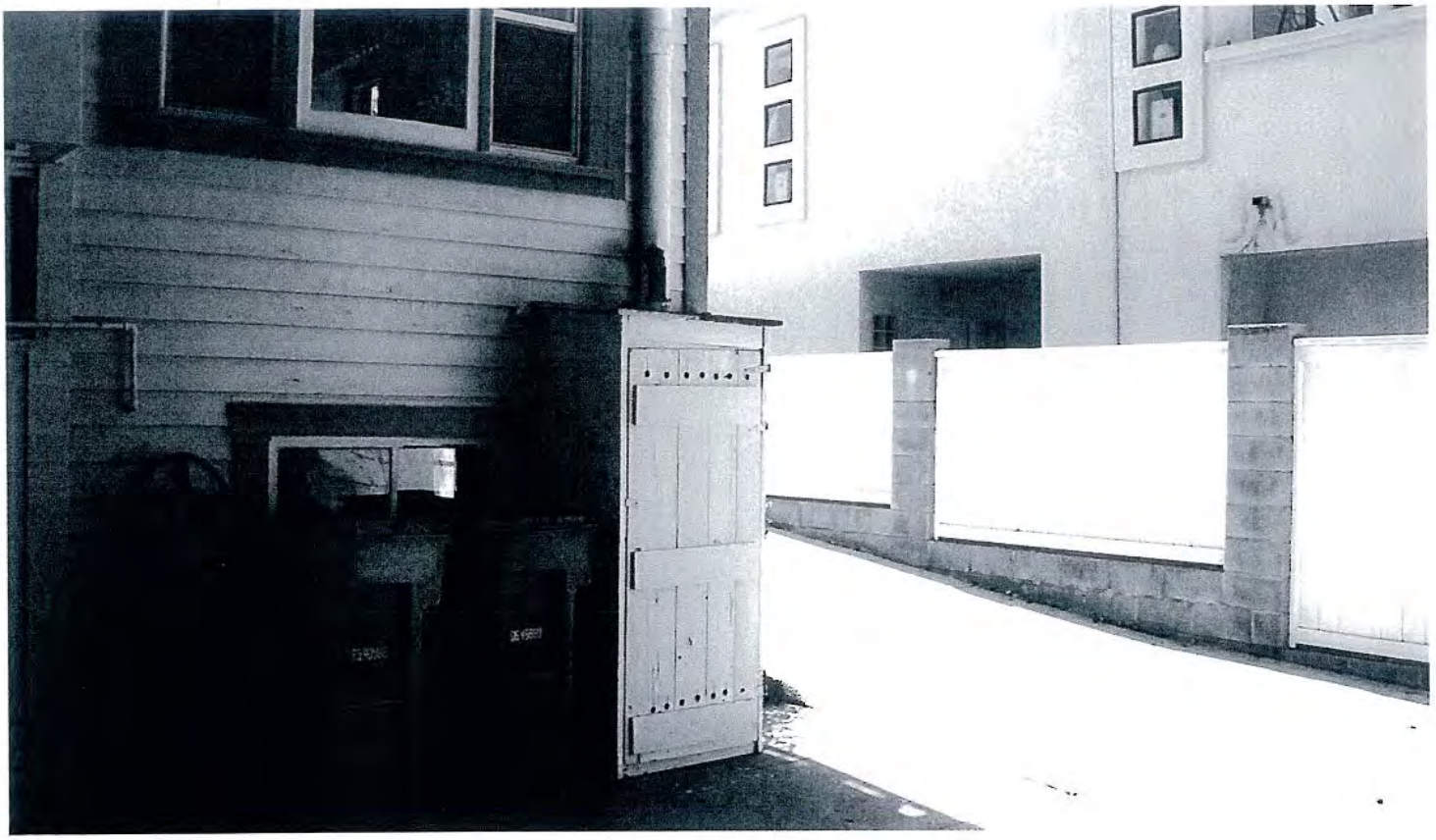
Mo.	Day	Time	Frame	Subject/Description	View	Acc. No.
			0			
7	15	AM	1	Front of 219 S. Francisca	W	
7	15	AM	2	Close up front of 219 S. Francisca	W	
7	15	AM	3	Front of 219 S. Francisca	NW	
7	15	AM	4	Back of 219 S. Francisca	E	
7	15	AM	5	Back stairs of 219 S. Francisca	E	
7	15	AM	6	Utility shed, back of 219 S. Francisca	SE	
7	15	AM	7	Garage of 219 S. Francisca	SW	
7	15	AM	8	Garage of 219 S. Francisca	W	
7	15	AM	9	Garage of 219 S. Francisca	W	
7	15	AM	10	Back door w/BBQ stand of 219 S. Francisca	S	
7	15	AM	11	Overview of S. Francisca	NW	
7	15	AM	12	Overview of S. Francisca	SW	
7	15	AM	13	Overview of S. Francisca (opposite side of street)	SE	
7	15	AM	14	Overview of S. Francisca (opposite side of street)	NE	
7	15	AM	15	Overview of Pacific Coast Highway	SE	
7	15	AM	16	Overview of Pacific Coast Highway	SE	
			17			
			18			
			19			
			20			
			21			
			22			
			23			
			24			
			25			

Photograph 1.

Photograph 2.



Photograph 3.



Photograph 4.

Photograph 5.

Photograph 6.

Photograph 7.

Photograph 8.

Photograph 9.

Photograph 10.

Photograph 11.

Photograph 12.

Photograph 13.

Photograph 14.

Photograph 15.

Photograph 16.

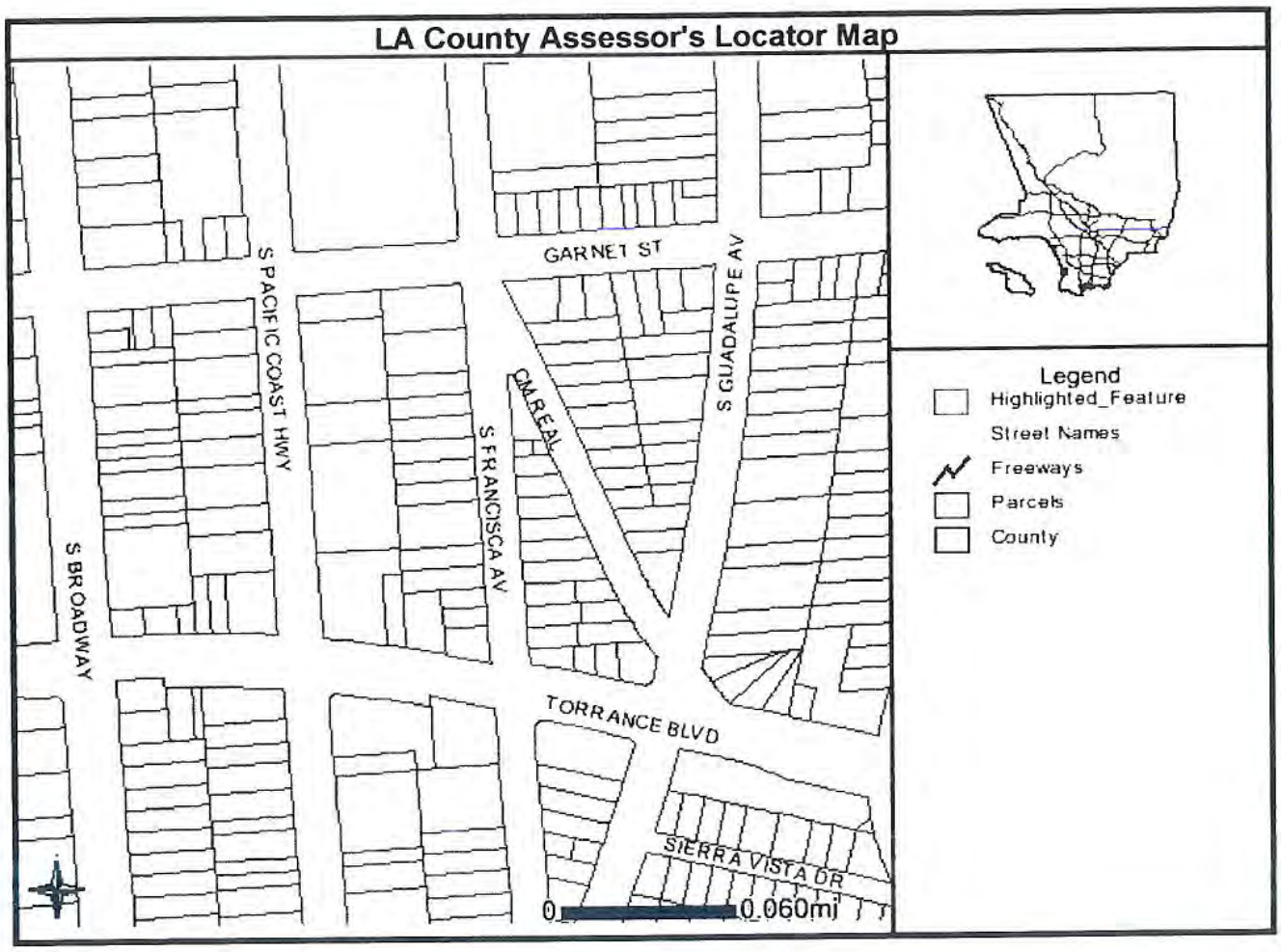
APPENDIX C:

Historic Research Data

Record 1

Assessor's ID Number	7505-020-005
Site Address	219 S FRANCISCA AVE
Site City/Zip	REDONDO BEACH CA 90277
Property Type	Single Residence
Assessor Map	Click Here for Assessor Map
TRA Number	08055
Recording Date	10/03/1997
2001 Land Value	$211,935
2001 Improvement Value	$52,982
2001 Exemption Claim	
2001 Personal Property Value	$0
2001 Fixture Value	$0
2001 Homeowners' Exemption Value	$0
2001 Real Estate Exemption Value	$0
2001 Personal Property Exemption Value	$0
2001 Fixture Exemption Value	$0
Legal Description	REDONDO BEACH LOT 8 BLK 153
--- IMPROVEMENT 1 ---	
Main Improvement Sq. Ft.	1096
Bedrooms	2
Bathrooms	1
No. of Units	1

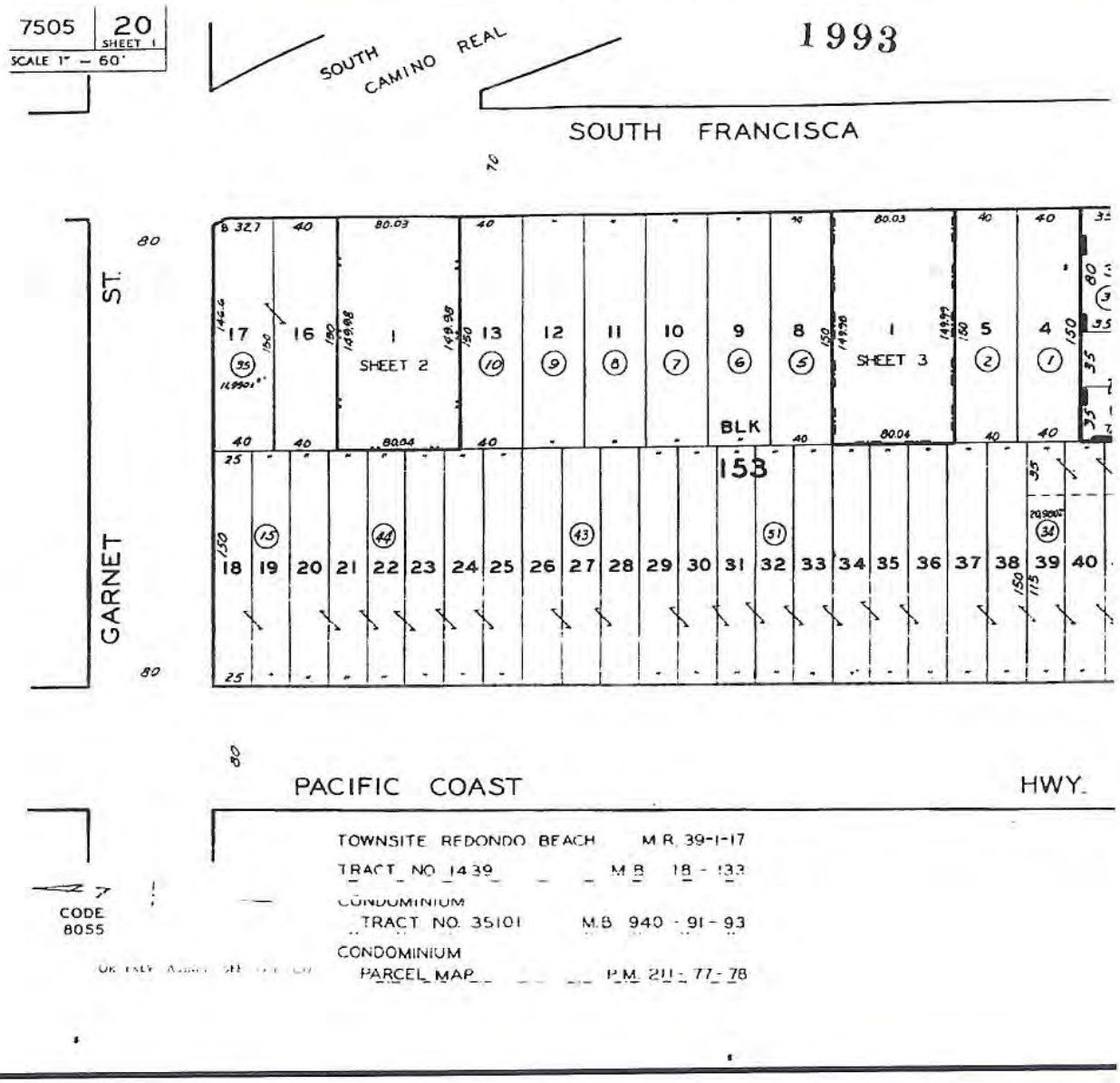
2001 Annual Taxes Click Here


LA County Assessor's Locator Map
GARNET ST
S GUADALUPE AV
S PACIFIC COAST HWY
S FRANCISCA AV
CAMREAL
S BROADWAY
TORRANCE BLVD
SIERRA VISTA DR
0
0.060mi
Legend
Highlighted_Feature
Street Names
Freeways
Parcels
County

Next >>

View Enlarg

County of Los Angeles: Rick Auerbach, Assessor



40X150

LOT 8 BLOCK 153 TRACT TS

ST. ADDRESS 219 S. Francisca

SIZE BLDG. ZONE R-3 FIRE ZONE 3

CONTRACTOR Owner

USE OF BUILDING Alterations

PERMIT NO.	DATE	NAME	DESCRIPTION
259	10/1913	S. Johnson	Res.
3471	4/27/38	D. E. Byers	Alterations
House to House insp. 10/15/76 - single family			res., 1-car det. gar.
E972537	10-9-97		Elec Service Upgrade

See Teresa Gianos for historic preservation

9-17-97
4-11-02

90 X 150

E972537
FINAL ON BUILDING: 10-13-97

REMARKS:

TENTS — TRAILERS —

NON CONFORMING BUILDINGS

7505 20

MB.	PG.	PCL.
39	1-17	5

ARCHITECTURAL/HISTORICAL BUILDING INVENTORY

No. _____

LOCATION AND IDENTIFICATION:

1. Address: _____ Name: _____
2. City: Whittier Zip: 9060 County: Los Angeles
3. Parcel No.: _____
4. Present Use: Residential S M Comm.___ Religious ___ School ___ Industrial ___ Vacant ___
   Other _____ Other _____

DESCRIPTION:

5. Architectural Style: Bungalow
6. Plan: Rectangular ✓ Square ___ "L" ___ "U" ___ "T" ___ Irregular ___ Other _____
7. Height: 1 Story ✓ 2 Story _____ 3 Story _____ 4 Story _____ Multiple _____ Other _____
8. Roof Shape: Gable ✓ Hip _____ Flat _____ Composite _____ Spanish ___ Other _____
9. Fabric: Wood: ✓ Stucco ___ Brick ___ Concrete ___ Metal ___ Lucite ___ Other _____
10. Windows: Flat __ Arch __ Segmental ✓ Sash __ Fixed __ Bay __ Slider V_AL_ Other C wood fra
11. Condition: Excellent: _____ Good ✓ Fair ___ Poor ___ Deteriorated ___ Other _____
12. Alterations: None ___ Major ___ Minor ✓ Type of Alteration new door
13. Related Features: None _____ Type of Feature brick ret. wall
    Type of Feature _____

Garage 1 car (Attached____) (Detached ✓)

SIGNIFICANCE: CATEGORY _____ (see notes)

14. Main Theme of Resource: Architecture ___ Settlement ___ Economic/Industrial ___
    Religious _____ Government _____ Leisure/Arts _____
    Military _____ Education _____ Other _____ Other _____
15. Date(s) of Construction: Estimated: _____ Factual _____
16. Historic Use(s): Residential ___ Commercial ___ Industrial ___
    Religious/School ___ Other ___ Other ___
17. Historic Association: None: ___ Type _____

SURVEY DATA:

18. McKenna et al. Date: _____
    6008 Friends Avenue Photos: Roll _____
    Whittier, California 90601-3724 Frame _____
    (562) 696-3852 (562) 693-4059 FAX) View _____
19. Sources/References _____ Frame _____
    _____ View _____
    _____

APPENDIX D:

Archaeological Site Survey Records (DPR Forms)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #_____
HRI# _____
Trinomial _____

Page 1 of 9 * Resource Name or # (Assigned by recorder) 7505-020-005 (Michael Tumanjan Property)

P1. Identifier: APN: 7505-020-005

***P2. Location:** ☐ **Not for Publication** **X** **Unrestricted**

***a. County:** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Resondo Beach 7.5' Quad Date 1981 **T** 4S ; **R** 14W ; ___ **1/4 of Sec.** 7 ; S.B. **B.M.**

c. Address 219 S. Francisca City Redondo Beach Zip 90277

d. UTM: (Give more than one for large and/or linear resources) Zone 11 ; _____ mE/_____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

On west side of Francisca Avenue; between Garnet Street and Torrance Blvd.; middle of block.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The residence at 219 S. Francisca Avenue is a single family, single story building with a basement. The building rests on a concrete foundation with both vents and windows. A short set of concrete steps lead to the front door and porch - also presumed to be a concrete porch slab. The structure is wood framed and wood sided (clapboard siding) and double hung sash windows (1 over 1 panes) with "ears" indicative of the 1910s and 1920s window designs. There are some fixed windows and some of the sash windows have been replaced by aluminum or vinyl sliding windows (all in the rear of the building and not visible from the street).

SEE CONTINUATION SHEET

***P3b. Resource Attributes:** (List attributes and codes) HP-2 (Single Family Residence)

***P4. Resources Present:** **X** Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession #) Digital Photos, on file, McKenna et al.c

***P6. Date of Construction/Age and Source** 1913

X Historic ☐ Prehistoric ☐ Both

Assessor Data /City Files

***P7. Owner and Address:**
Michael Tumanjan
5533 Bayridge Road
Rancho Palos Verdes, CA 90275

***P8. Recorded by:** (Name, affiliation, and address)
Jeanette A. McKenna (McKenna et al.)
6008 Friends Avenue
Whittier, California 90601-3724
(562) 696-3852 (562) 693-4059 FAX

***P9. Date Recorded:**

*P10. Survey Type: Historic Resources Evaluation - 219 S. Francisca Avenue

***P11. Report Citation:** (Cite survey report and other sources, or enter "none".) McKenna, Jeanette A. - An Evaluation of the Residential Structure Located at 219 S. Francisca Avenue, City of Redondo Beach, Los Angeles County, California. On file, McKenna et al., Whittier, California.

***Attachments:** NONE **X** Location Map **X** Continuation Sheet **X** Building, Structure, and Object Record

☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record

☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BUILDING, STRUCTURE, AND OBJECT RECORD

Primary #_____
HRI# _____
Trinomial _____

*NRHP Status Code: _____

 * Resource Name or # (Assigned by recorder) 7505-020-005 (Michael Tumanjan Property)

B1. Historic Name: The S. Johns Residence (ca. 1913)
B2. Common Name: The Tumanjan Property
B3. Original Use: Single Family Residence **B4. Present Use**: Single Family Residence
***B5. Architectural Style**: California Bungalow
***B6. Construction History**: (Construction date, alterations, and date of alterations)

Original construction by Johns in 1913; Alterations by Byers in 1938; General maintenance throughout the years.

***B7. Moved?** X No ☐ Yes ☐ Unknown **Date**: _____ **Original Location**: _____
***B8. Related Features**:

Board and Batten Garage (with small room to rear) in middle of lot (access by driveway).

B9a. Architect: Unknown **b. Builder**: Unknown
***B10. Significance: Theme** Early Development of Redondo Beach **Area** Original Townsite
Period of Significance 1888-1923 **Property Type** Residential **Applicable Criteria** None
(Discuss importance in terms of historical and architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The structure located at 219 S. Francisca Avenue was built in 1913 (with the possibility that the garage structure was built earlier). Citing the "City of Redondo Beach Historic Context Statement" (1995), the year of construction falls within the period ranging from 1905 to 1923 and associated with the development of the Redondo Beach harbor (Duncan-Abrams and Milkovich 1995). Summarizing their discussion, and as presented by McKenna (1996:22-23), the context is as follows:

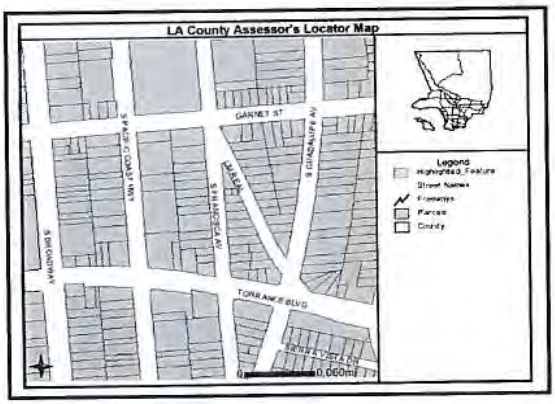
> ... the years immediately following the electrification of the Los Angeles and Redondo Railway were prosperous ones for the City of Redondo Beach. Since the port of Los Angeles was not yet complete, Redondo was still an important receiving bay for lumber and oil. Tourism continued to flourish, and industry was attracted to the community by an ambitious city promotion program ...

B11. Additional Resource Attributes: (List attributes and codes) None
B12. References: McKenna, Jeanette A. (2002) - An Evaluation of the Residence at 219 S. Francisca Avenue, City of Redondo Beach, Los Angeles County, California. On file, McKenna et al., Whittier, CA.

B13. Remarks: Structure is intact and occupied, but determined to ba an insignificant resource.

***B14. Evaluator**: Jeanette A. McKenna (McKenna et al.)
6008 Friends Avenue
Whittier, California 90601-3724
(562) 696-3852 (562) 693-4059 FAX)
*Date of Evaluation: July, 2002

(Sketch Map with north arrow required.)



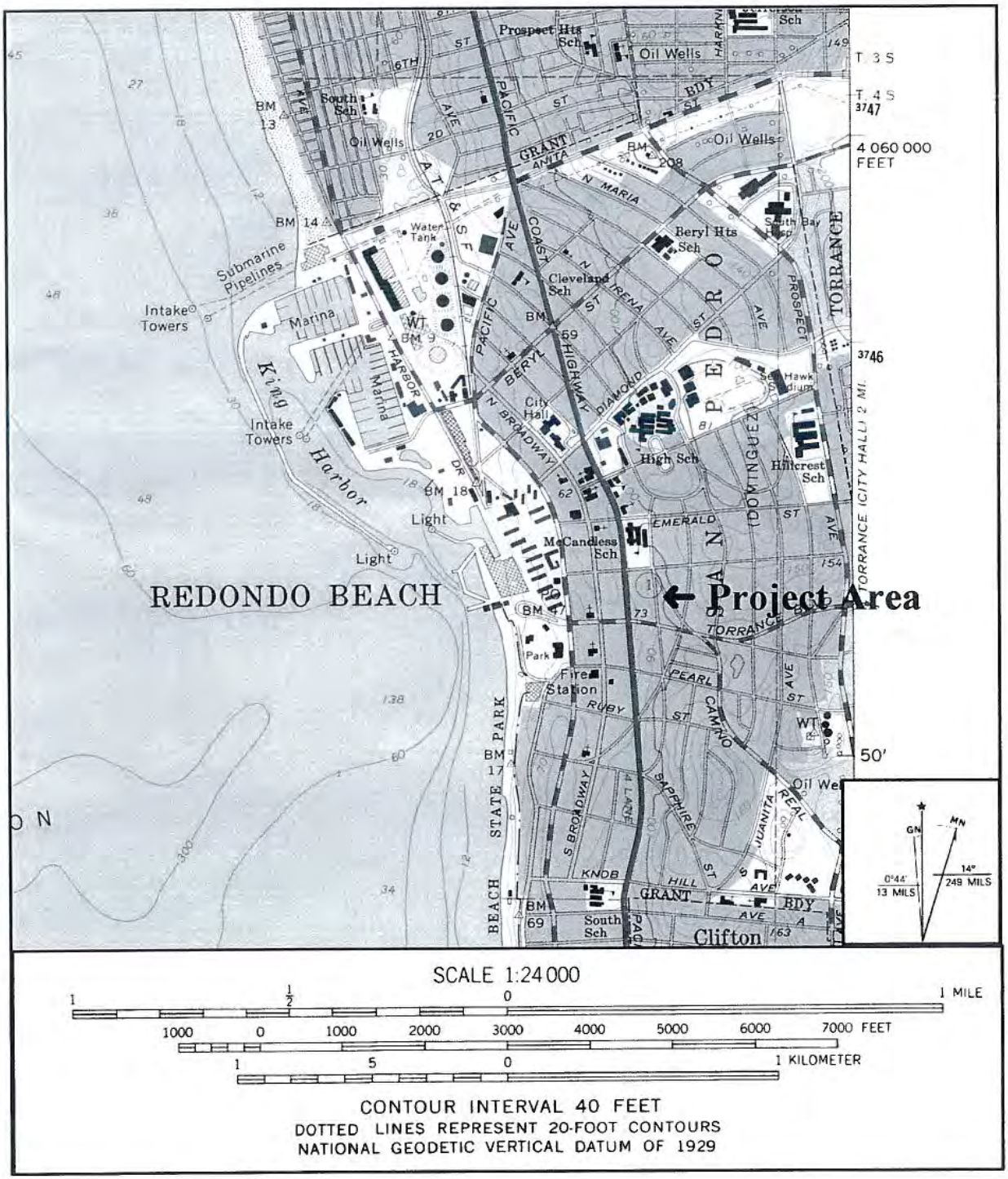
(This space reserved for official comments.)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #_____
HRI# _____
Trinomial _____

Page 3 of 9 * Resource Name or # (Assigned by recorder) 7505-020-005 (Michael Tumanjan Property)
*Name of Map: USGS Redondo Beach Quadrangle *Scale: 1:24000 Scale *Date of Map 1981



* Required Information

P3a. Description (Continued)

Each of the sash windows are framed with simple, 1" x 4" boards and standard window sills. The corners of the structure are also framed with 1" x 4" boards. Facia boards are flat and simple, as are the majority of the exposed eave beams. The exposed beams on the east elevation (facing S. Francisca Avenue) exhibit slight decorative elements (notched and reinforced beams supporting the roof over the porch). The door on the front porch is modern (recently replaced). A lattice air vent is present on the east elevation, as well.

The roof line is relatively low, exhibiting a gable roof with a pitch of approximately 25 degrees. A single brick chimney is evident on the south side of the structure, towards the rear, and appears to be an interior feature (no exterior structure on the south elevation).

A second entrance is located to the rear of the residence. In this case, the entrance is accessed from a small rear porch and staircase located above the entrance to the basement (see attached Photo-graphic Record). A small enclosure has been added to this porch to support a storage area for picnic/BBQ materials. The water heater is located at the southeast corner of the structure (exterior), adjacent to the driveway area. A large tree shades the backyard and rear of the residence.

Overall, the residence is in good shape, well maintained, and with the exception of the enclosed from porch, exhibits the original 1910 construction design. **In general, this structure could be identified as a California Bungalow with some very slight "Craftsman-like" elements (e.g. slightly wider eaves and attic vents). This structure should not be considered a Craftsman.**

The garage associated with this property reflects a completely different mode of construction. In this case, the garage is identified as a board and batten structure with a shed roof; hinged doors, and in poor condition. This structure appears older than the residence and likely preceded it in construction. This structure is rectangular in shape - extending into the yard areas and exhibiting two roughly framed windows on the north elevation. A small segment of lattice work is located at the northwest corner of the structure, providing some decorative function. The size of this structure (approximately 18 to 20 feet deep by 12 feet wide) is slightly larger than the average 1920s era garage, indicating the rear of this structure may have served as a small living area (hence the additional address on the Sanborn Map). This structure rests on a concrete foundation, but the concrete flooring was apparently added at some later date (when the driveway was paved). It is possible that this structure served as the original residence while the more substantial residence was under construction.

B 10. Significance (Context Statement)

> Redondo Beach owes its physical character and development patterns to the contributions of three separate real estate groups of community promoters ... Redondo Beach experienced a revival or reawakening in 1905 when electric rail magnate Henry E Huntington decided to invest in its future ... Huntington ... built upon the goals and dreams of ... earlier promoters and, with his virtually unlimited resources, was able to complete ... dreams of both a seaside resort and industrial port ...
>
> On July 7, 1905, Huntington purchased the interests of the Redondo Beach Improvement Company and, just four days later, he purchased the Los Angeles and Redondo Railway. With these two purchases, he secured a foothold on the bay. Townspeople welcomed his investment reputation. For several days following the announcement of Huntington's investment in city property, the town was overwhelmed by buyers and sellers, each anxious to profit

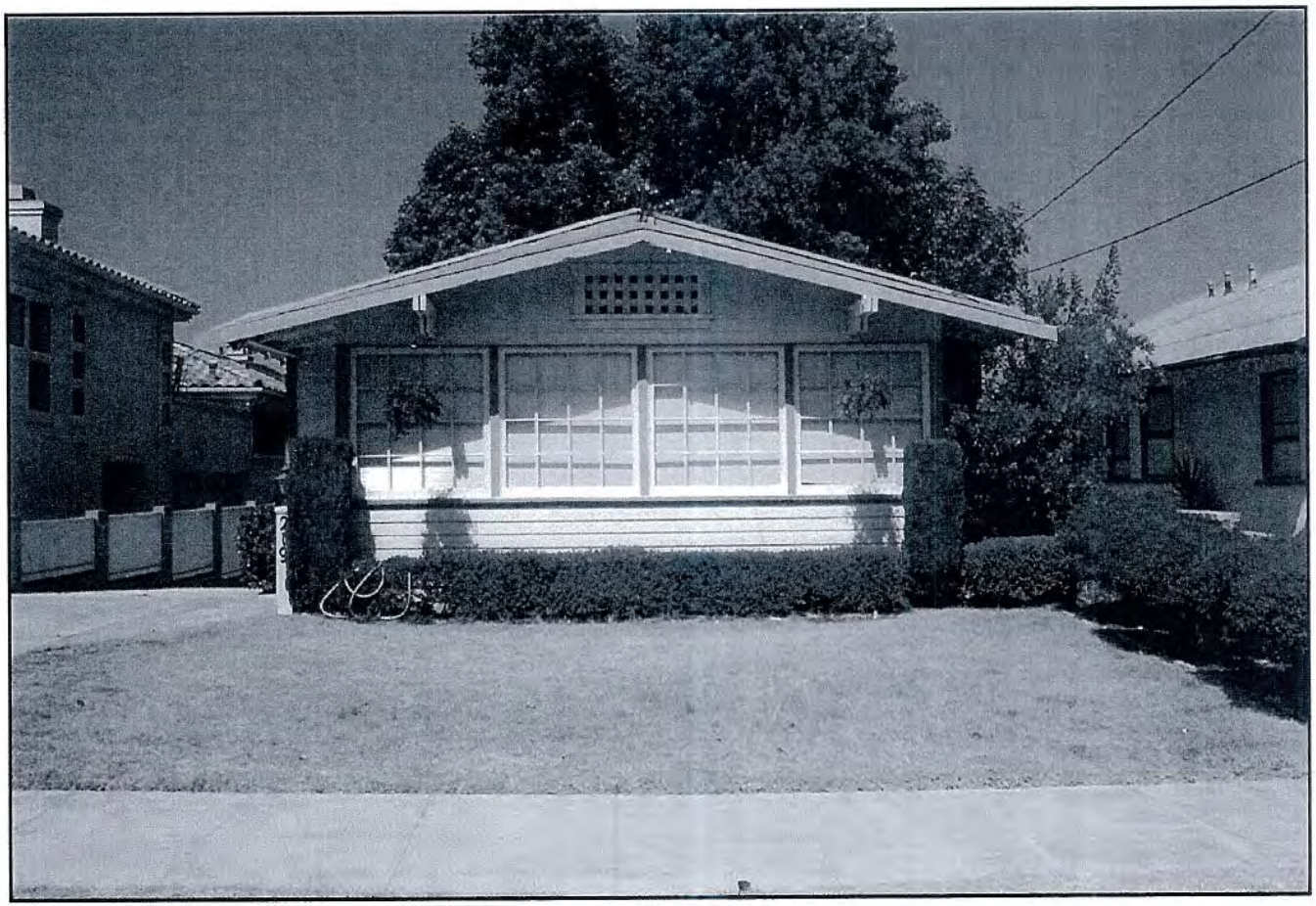
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #_____
HRI# _____
Trinomial _____

* Resource Name or # (Assigned by recorder) APN 7505-020-005 (219 S. Francisca Avenue)

*Recorded by: Jeanette A. McKenna, McKenna et al. *Date: July 2002 X Continuation ☐Update



* Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #_____
HRI# _____
Trinomial _____

Page 6 of 9 * Resource Name or # (Assigned by recorder) APN 7505-020-005 (219 S. Francisca Avenue)

*Recorded by: Jeanette A. McKenna, McKenna et al. *Date: July 2002 X Continuation ☐Update

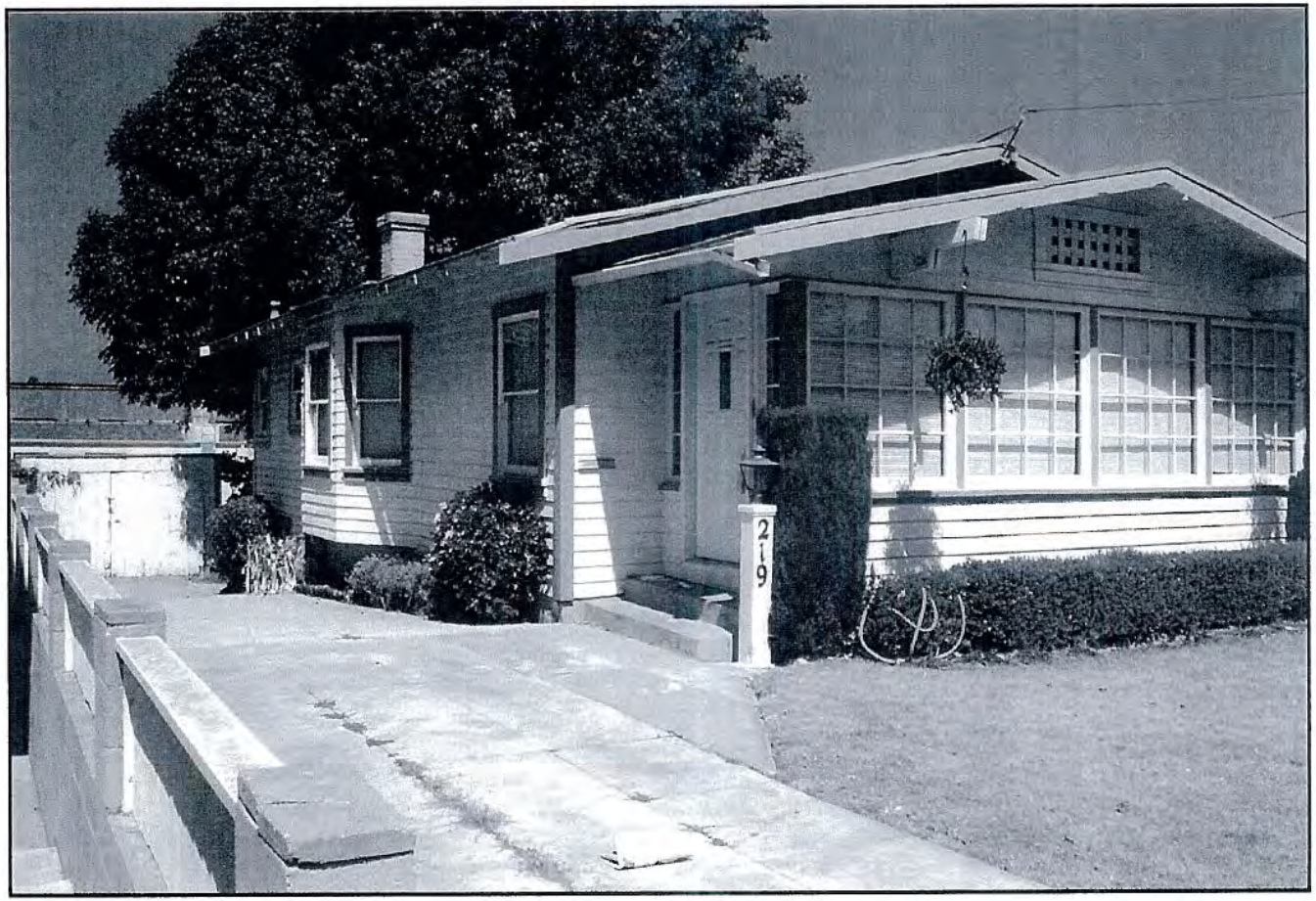
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #_____
HRI# _____
Trinomial _____

* Resource Name or # (Assigned by recorder) APN 7505-020-005 (219 S. Francisca Avenue)

*Recorded by: Jeanette A. McKenna, McKenna et al. *Date: July 2002 X Continuation ☐Update



* Required Information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary #_____
HRI# _____
Trinomial _____

* Resource Name or # (Assigned by recorder) APN 7505-020-005 (219 S. Francisca Avenue)

*Recorded by: Jeanette A. McKenna, McKenna et al. *Date: July 2002 X Continuation ☐Update

on Redondo Beach land ...

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION FORM

Primary #_____
HRI# _____
Trinomial _____

Page 9 of 9 * Resource Name or # (Assigned by recorder) APN 7505-020-005 (219 S. Francisca Avenue)
*Recorded by: Jeanette A. McKenna, McKenna et al. *Date: July 2002 X Continuation ☐Update

> Other investors followed his lead. At least one opened large tracts of previously un-developed land nearby and subdivided it for agricultural uses ... Within the original townsite, development continued as investors subdivided and/or developed, virtually completing the settlement of coastal Redondo Beach ... The final result was development of the region with diverse areas appealing to a variety of incoming residents.

Backtracking to the earlier development of the City of Redondo Beach, the original townsite was established in 1887 (incorporated in 1892) and within the historic Rancho Dominquez. Charles Silent purchased 1000 acres from the Dominquez family for the purpose of establishing a townsite. William Hammond Hall (California State Engineer) prepared the original site map for the townsite (McKenna 1996:13). Hall used historic names in identifying streets, including names associated with the Dominquez family (e.g. Francisca Avenue).

Redondo Beach was connected to the City of Los Angeles via the Santa Fe Railroad (ca. 1888). The light rail system (the Redondo Railway) was established by 1889. The Los Angeles and Redondo Railway also serviced the area in the 1890s and into the Twentieth Century. Edison completed their substation in Redondo Beach in 1910, providing the community with a local source of electric power.

Construction of single family homes continued into the 1910s and well though the 1920s, eventually resulting in the almost complete development within the original townsite. Redondo Beach boasted of a population of 5,000 in 1920 and another 15,000 residents by 1930.

As a result of the 1986 survey, approximately 1400 pre-1946 structures were identified in south Redondo Beach. A total of 28 were identified as "A" structures;129 were identified as "B" structures; 712 were identified as "C" structures; and 521 structures were identified as "D" structures. California Department of Parks and Recreation 523 Forms were completed for the "A" and "B" structures, only. Using the rating systems developed for the 1986 survey, the property located at 219 S. Francisca Avenue would have been identified as a "C" category structure - a building the retains the majority of its original design, but is "fairly modest" and less likely to be of historical importance. Such a structure could, however, be considered a contributing element of an historic district - assuming a district can be identified. This address is not specifically identified in the 1986 survey, but was subjected to a cursory evaluation during the investigations for an updated survey in 2001 (on file, McKenna et al., Whittier).

LA10068

Pg: 17
Ty: (17) other

CULTURAL RESOURCE ASSESSMENT

HERMOSA VALLEY SCHOOL GYMNASIUM AND CLASSROOMS PROJECT

CITY OF HERMOSA BEACH, LOS ANGELES COUNTY, CALIFORNIA

Submitted to:

Ms. Angela Jones
Business Manager
Ag: Hermosa Beach City School District
1645 Valley Drive
Hermosa Beach, California 90254

Prepared by:

Au: Shannon Carmack and Judith Marvin
F: LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

19-186927

LSA Project No. HRM330

National Archaeological Data Base Information:

Ty: *Type of Study*: Records Search and Reconnaissance Survey (17)
Quad: *USGS Quadrangle*: *Redondo Beach 7.5'* 903
Ac: *Acreage*: ~ 8.8 acres
Key Words: CEQA, Valley Vista School
Sites: *Sites*: None Ø of 48

LSA

Da: August 2004

TABLE OF CONTENTS

FIGURES

APPENDIX

ABSTRACT

This document reports the results of a cultural resources records search and reconnaissance survey within the boundaries of the Hermosa Valley School property. The Hermosa Valley School is a roughly rectangular 8.8-acre parcel of land located at 1645 Valley Drive in the City of Hermosa Beach, County of Los Angeles, California. Under contract to the Hermosa Beach City School District (District), LSA Associates, Inc. (LSA) identified cultural resources that may be impacted by planned construction activities within the project area. LSA conducted the work pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Chapter 2.6, Section 21083.2 (as amended January 1, 1999), and the California Code of Regulations, Title 14, Chapter 3, Article 5, Section 15064.5.

An records search was conducted at the South Central Coastal Information Center at California State University, Fullerton. The results of the records search indicated that no cultural resources were previously recorded within one-half mile of the project area. There are no properties listed on the National Register, California Register, California Historical Landmarks, or the California Points of Historical Interest within the project area. In addition, there are no properties listed in the Historic Properties Directory (HRI 2004) that match the address of the Hermosa Valley School.

On February 12, 2004, LSA archaeologist Shannon Carmack conducted a field survey of the project area for archaeological resources. In addition, a survey of the buildings within the project area was also conducted. No archaeological resources were observed during this survey. Ground visibility in the project area was limited, because most of the project area is landscaped or paved with asphalt. The school is located within an area that has been substantially modified from its original landscape.

Three of the school buildings located within the project area were identified as being more than 50 years old. These three buildings, constructed in the Modern Style, comprised the original Valley Vista School, established in 1952. Architectural Historian Judith Marvin reviewed the documentation for the Valley Vista School and determined that the buildings are lacking in integrity and do not appear to be eligible for the California Register. Therefore, the Valley Vista School is not considered a historic resource for the purposes of CEQA.

The records search did not identify any previously recorded cultural resources within the project area. During the field survey, no archaeological resources were observed. Although the Valley Vista School was identified as being older than 50 years in age, the results of LSA's assessment indicate that the school is not a historic resource for the purposes of CEQA.

Although no cultural resources were identified within the project area, the project site may contain unknown subsurface archaeological resources. LSA recommends that all ground-disturbing activities within the project area be monitored by a qualified archaeologist. Following completion of the construction monitoring, a Report of Findings shall be completed.

If human remains are encountered during ground-disturbing activities, State Health and Safety Code Section 7050.5 requires that no further disturbance may occur until the County Coroner has made a determination of origin and disposition, pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will identify and notify a most likely descendant (MLD). The MLD may inspect the site of the discovery with the permission of the landowner or his or her authorized representative. The MLD shall complete an inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and analysis of human remains and items associated with Native American burials.

INTRODUCTION

This document reports the results of a records search and reconnaissance survey within the boundaries of the Hermosa Valley School property. The project location consists of a roughly rectangular parcel of land located at 1645 Valley Drive in the City of Hermosa Beach, County of Los Angeles, California. Under contract to The Hermosa Beach City School District (District), LSA identified cultural resources that may be impacted by planned construction activities within the project area. LSA conducted the work pursuant to the California Environmental Quality Act (CEQA) of 1970 (see Appendix A), Public Resources Code Chapter 2.6, Section 21083.2 (as amended January 1, 1999), and the California Code of Regulations, Title 14, Chapter 3, Article 5, Section 15064.5.

Project personnel included Deborah McLean, a Registered Professional Archaeologist (RPA), who served as Project Manager and who provided oversight for all cultural resource work; Judith Marvin, an architectural historian; and Shannon Carmack, who surveyed the project area.

PROJECT LOCATION AND DESCRIPTION

Hermosa Valley School is located within the City of Hermosa Beach, Los Angeles County, California. It is a roughly 8.8-acre rectangular parcel of land. Specifically, the project area is located within an unsectioned portion of Township 3 South Range 15 West, San Bernardino Baseline and Meridian, and can be depicted on the USGS *Redondo Beach* 7.5 minute topographic quadrangle map (Figure 1).

The proposed project consists of the construction of one building that will contain a gymnasium, several classrooms, a library, and miscellaneous rooms. The proposed project will displace existing handball courts, relocatable classrooms, and volleyball and basketball courts. A retaining wall will be constructed behind the new building. No existing buildings will be demolished for the proposed project.

LSA

FIGURE 1

0 1000 2000

FEET

Hermosa Valley School

Project Location

SOURCE: USGS 7.5' QUADS - REDONDO BEACH & TORRANCE, CALIF.

I:\HRM330\G\Location_HermosaVS.cdr (7/22/04)

SETTING

NATURAL SETTING

The project site is currently developed with Hermosa Valley School, including five buildings, two parking lots, an asphalt court area, and grass turf athletic fields. The site is relatively flat and generally slopes toward the northwestern corner of the property. A footpath that begins at Loma Drive traverses the vegetated sand dune and exits into the asphalt court area. Surface drainage sheet flows down the contours of the land to the northwest to Valley Park Avenue

Biology

The developed portion of the site contains ornamental trees and shrubs and the grass turf athletic fields. The vegetated sand dune contains few native plants but does contain California encelia and California poppies. Several ornamental trees are present on the sand dune, including eucalyptus. Groundcover on the sand dune consists of nonnative ice plant and nonnative acacia tree species. Scattered areas of ruderal vegetation include common nonnative and native invasive weeds.

Geology

The project site is underlain by dune sands and coastal deposits of Quaternary age, as mapped by J.F. Poland and others in the USGS Water Supply Paper 1461, Plate 2 (Southern Half): *Geology, Hydrology, and Chemical Character of Ground Waters in the Torrance-Santa Monica Area, California,* 1959. The dune sands are light brown, yellowish brown and light reddish brown, slightly moist, dense to very dense, and fine- to coarse-grained. The dune sands described are common in this area of Hermosa Beach.

CULTURAL SETTING

Prehistoric Setting

Of most relevance to this report is the ethnographic group of Native Americans who occupied the project area and whose artifactual items potentially remain. Ethnographic studies show that the project area was occupied by a Uto-Aztecan speaking Native American group known as the Gabrielino during the 16th to 19th centuries (Heizer, 1978). The term *Gabrielino* is derived from the association of these Indian peoples with Mission San Gabriel. The following paragraphs were taken from various sources and briefly summarize aspects of the Gabrielino cultures.

The Gabrielino Indians practiced a hunter-gatherer lifestyle and lived in permanent communities near the convergence of two or more environmental zones or habitats (Bean and Smith 1978). Commonly chosen sites included areas near rivers, streams and inland watercourses, sheltered coastal bays and estuaries, and the transition zone delineating prairies and foothills. Important considerations influencing the location of habitation sites included the presence of a stable food supply and some

measure of protection from flooding. Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. Gabrielino communities located in the interior regions maintained permanent geographical territories or use areas that may have averaged 30 square miles. However, it is unclear whether this pattern was similar for coastal settlements, where food resources may have been more plentiful (White 1963:117; Oxendine 1983:44). In addition to these permanent settlements, the Gabrielino occupied temporary campsites that were used on a seasonal basis for hunting, fishing, gathering, and processing of wild plant foods and shellfish (McCawley 1996:25).

Gabrielino culture was characterized by an active and elaborate system of rituals and ceremonies. Rituals included individual rites of passage, village rites, seasonal ceremonies, and participation in the widespread *Chengiichngech* cult. The cult of the culture hero *Chengiichngech* was observed and recorded by Franciscan Friar Gerónimo Boscana during his residences at missions San Juan Capistrano and San Luis Rey (Harrington 1933; Boscana 1933).

Historic Setting

The first recorded contact between the Gabrielino and Europeans occurred in 1542, when the Cabrillo Expedition arrived at Santa Catalina Island (Wagner 1941). On the mainland, the first documented contact between the Gabrielino and Europeans occurred in 1769, when an expedition led by Gaspar de Portolá crossed present-day Los Angeles and Orange Counties (W. Bean 1968:36-38; Bolton 1927).

Within two years, *Mission San Gabriel Archangel* was founded (September 8, 1771) and was the fourth of the missions (Hoover et al. 1962:12; McCawley 1996:189). It was originally planned that the mission be constructed on the banks of the Santa Ana River but it was relocated to a bluff overlooking the Rio Hondo, then called the San Gabriel River, approximately one-half mile north of the Montebello oil district near Whittier Narrows. Today, nothing remains of the original buildings except a few buried tiles that are occasionally found.

The Franciscans' goal in founding the missions was to convert the Indians to the Spanish Catholic faith and incorporate them into the lower strata of Spanish society. However, the final result of missionization was the destruction of the Gabrielino culture and society. Two important factors contributed to this decline: first, many of the youngest, healthiest, and most productive Gabrielino were removed from the Gabrielino economy when they entered the Mission System; second, the introduction of highly infectious European diseases, for which the Gabrielino had no immunities, led to epidemics and reduced birth rates, which further disrupted traditional Gabrielino political, social, and economic institutions.

As a result, most of the traditional Gabrielino communities were depopulated, and the survivors became assimilated into the Mexican-American communities of Los Angeles and Orange Counties. During the 1920s, anthropologist A. L. Kroeber was unable to locate a group claiming Gabrielino heritage, although he did interview several individuals of Gabrielino ancestry. Currently, the Gabrielino are not a federally recognized tribe, although there are individual spokespeople of Gabrielino descent (Rosenthal et al. 1991; Weinroth 1994).

The Spanish Mission period ended when Mexico won its independence from Spain in 1821. The new Mexican government acted quickly to undermine the power and wealth of the California missions. The Mexican Republic passed the Secularization Act of 1833, which demoted the missions to parish churches and gave the Mexican governor power to redistribute the vast wealth controlled by the missionaries. The Spanish Mission lands were carved up into ranchos.

The period between the 1830s and the 1840s is known as the golden age of ranching in California because the Mexican governor gave huge land grants during this time. Approximately seven hundred land grants were given to Mexican citizens and settlers between 1833 and 1846 (Cleland 1941). The City of Hermosa Beach is located within the boundaries of the Rancho Sausal Redondo (Hoover et al. 1962).

In 1901, a portion of the rancho was purchased by the Hermosa Beach Land and Water Company and subdivided. Hermosa, from the Spanish word for "beautiful," was created as an advertising name (Gudde 1998).

The following is taken from Rhein (1933):

> The water supply for the town was installed by the Hermosa Beach Land and Water Company in 1901. They located a well on the north city limits. Later the company bought an artesian well and built a reservoir just outside of the eastern end of town. The water from this well was drawn from a seemingly limitless subterranean reservoir three hundred feet below the surface. In 1904, the first pier was built. It was constructed entirely of wood, even to the pilings, and extended five hundred feet out into the ocean. Eventually, a bait stand was built at the end of the pier. The small community began to grow, and the first City election for City officers was held December 24, 1906. The town incorporated and its charter was obtained from the State on January 14, 1907.
>
> The Santa Fe railway was the only transportation system through Hermosa Beach. It was seven blocks from the beach. The street that led to the tracks was called Santa Fe Avenue, but was later renamed Pier Avenue. There was no railway station for Hermosa, but Burbank and Baker built a platform on the west side of the tracks near Santa Fe Avenue, and later the Railroad Company donated an old boxcar to be used as a storage place for freight. In 1926, the Santa Fe Company built a modern stucco depot and installed a Western Union telegraph service office.

Through the 1930s and into the 1940s the City of Hermosa Beach remained a relative small and quiet beach community. World War II brought a surge in the development of the defense and aircraft industries of nearby cities, causing a residential spillover into Hermosa Beach. After the war, the residential development boom began. Many were drawn to the area due to low-interest loans and the affordable housing offered by subdivision developers (City of Hermosa Beach 1957).

From the 1940s to the late 1950s, the City of Hermosa Beach nearly doubled in size from 3,384 to 6,000. In response to the spike in post-war development, new subdivision housing, apartments, and schools, including the Valley Vista School, were constructed (City of Hermosa Beach 1957).

METHODS

RECORDS SEARCH

A records search was conducted at the South Central Coastal Information Center, located at California State University, Fullerton; it included a review of all recorded historic and prehistoric archaeological sites within the project area. In addition, LSA examined the National Register of Historic Places (National Register), California Register of Historic Resources (California Register), California Historical Landmarks, and California Points of Historical Interest. Lastly, the Historic Properties Directory was consulted (HRI 2004). With this knowledge, an informed assessment could be made of the potential effects of the proposed project on cultural resources and the kinds of resources that might be found during the field survey could be evaluated.

FIELD SURVEY

The purpose of this survey was to identify any cultural resources that may be impacted by the proposed project. This includes the relocation and verification of any sites discovered during the records search and the discovery of any previously unrecorded sites within the project boundaries. The survey consisted of a visual inspection of all areas where ground surface was exposed. When possible, 10-meter transects were walked across all areas with exposed soil.

A visual inspection of all the buildings within the project area was also conducted. The buildings were photographed and documented. Architectural Historian Judith Marvin reviewed these photographs and documentation in order to assess the potential impacts of the proposed project upon the buildings.

RESULTS

RECORDS SEARCH

Results of the records search indicate that there are no previously recorded cultural resources within the project boundaries. There are no properties listed on the National Register, California Register, California Historical Landmarks, or the California Points of Historical Interest within a one-half mile radius of the project area. In addition, no properties are listed in the Historic Properties Directory that match the address of the project. One cultural resource report has been completed that covered the proposed project area. This report also includes a letter from the City of Hermosa Beach Superintendent of Schools; the letter lists the construction dates for the school buildings as 1952, 1959, 1975, and 1976 (Hatheway 1983).

SURVEY

On February 12, 2004, LSA archaeologist Shannon Carmack completed a field survey of the project area. No archaeological resources were observed within the project area. Ground visibility within the project area was limited because most of the area where the proposed construction will occur is paved with asphalt or landscaped. The school is located within an area that has been completely modified from its original landscape.

Three of the school buildings located within the project area were identified as being more than 50 years old. The buildings were photographed and recorded on California State Department of Parks and Recreation (DPR) Forms. Architectural Historian Judith Marvin reviewed the documentation and evaluated the buildings for the California Register. These three buildings, constructed in the Modern Style, comprised the original Valley Vista School, established in 1952. Copies of the DPR forms can be found in Appendix A.

EVALUATION

The Valley Vista School was evaluated as to its eligibility for listing on the California Register. The State of California administers historic preservation programs through the Office of Historic Preservation in the Resources Agency's Department of Parks and Recreation. The California Register, adopted in 1992, is the "authoritative guide to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[1] State and local agencies may also determine which resources are to be considered in order to comply with CEQA.

[1] Title 14, State Historical Resources Commission, Regulations for the Nomination of Historical Resources to the California Register of Historical Resources.

The California Register criteria are based on National Register criteria. California properties that meet these criteria may be listed in the California Register. For a property to be eligible for inclusion on the California Register, one of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method or construction, or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

If the owner of historic resources objects to the nomination, the property is not listed in the California Register, but the State Commission may formally designate the resource as eligible for listing. Being listed in or eligible for the California Register does not protect the resource from demolition or alteration, but it does require an environmental review for projects that could have an effect on these resources. The State *CEQA Guidelines* require that "a resource shall be considered by the lead agency to be historically significant if the resource meets the criteria for listing on the California Register of Historical Resources." [2]

Valley Vista School

Built in the early 1950s, three rectangular massed Modern Style buildings comprise the original Valley Vista School, established in 1952. All three are clad in stucco and have low-pitch, side-gabled roofs clad in rolled composition roofing. Fenestration consists of aluminum and wood-frame windows and modern wood doors. The two northernmost buildings, A and B, were joined by a new addition in 1974. The facades were remodeled, and many of the windows and doors were replaced. Building C is located to the south of A and B. This building retains a few of its original Modern features, including a ribbon of four 6/1 fixed window, located on the eastern facade. A fourth school building was located to the north of Building A; it was destroyed in a fire sometime between 1963 and 1973. These tress buildings are located on a level lot facing east toward Valley Drive, with trees and shrubs surrounding the buildings. The buildings are in good condition but they are lacking in integrity.

This school was built shortly after World War II, during the post-war years of construction in Hermosa Beach. The original school consisted of four buildings constructed in the Modern Style. One of the buildings was destroyed in a fire sometime between 1963 and 1973. The remaining three original school buildings are in good condition, but they do not appear to be eligible for listing on the California Register under any of the applicable criteria. Although the school is associated with the post World War II development of Hermosa Beach, the school is not an important example of any specific event (Criterion 1). The school is not associated with any persons important in history (Criterion 2). The school was constructed in the Modern Style, a popular architectural style during the 1950s. The school is lacking in integrity and it is not an extraordinary example of the Modern Style of

[2] Title 14 CCR Sec.15064.5(a)(3).

architecture. Further, it is not the work of a master (Criterion 3). The school does not appear able to answer questions important to history (Criterion 4).

LSA's cultural assessment has determined that the buildings are lacking in integrity and they do not appear to be eligible for the California Register. Therefore, the Valley Vista School is not considered a historic resource for the purposes of CEQA.

MANAGEMENT RECOMMENDATIONS

The California Environmental Quality Act of 1970 (CEQA), State of California Public Resources Code 21083.2 (as amended January 1, 1999), provides policies for protection of historic and prehistoric archaeological resources. CEQA mandates the protection of cultural resources as part of environmental documentation. CEQA legislation attempts to protect cultural resources through identification, avoidance, or mitigation of impacts. Under CEQA, avoidance of impacts is the preferred alternative for cultural resources. Criteria for determining the significance of impacts to cultural resources are based on CEQA Section 21083.2 and CEQA Guidelines Section 15064.5. Impacts to cultural resources are potentially significant if the following occur:

- Disturbance or destruction of any known or unknown significant archaeological resource that is deemed to be unique, as defined in CEQA Section 21083. A unique archaeological resource is described as an artifact, object, or site that clearly:
  - Contains information needed to answer important scientific research questions, where there is demonstrable public interest in that information
  - Has a special and particular quality, such as being the oldest of its type or the best available example of its type
  - Is associated with a scientifically recognized important prehistoric or historic event or person
- Substantial adverse change in the significance of an historical resource. An historic resource is defined in CEQA Guidelines Section 15064.5(a) and is described as:
  - A resource listed in, or determined to be eligible by, the State Historical Resource Commission or the Lead Agency for listing on the California Register of Historical Resources
  - A resource included in a local register of historical resources

The records search did not identify any previously recorded cultural resources within the project area. The field survey identified the Valley Vista School, established in 1952 within the project area. LSA Architectural Historian Judith Marvin determined that the school does not appear to be eligible for the California Register, and therefore is not considered a historic resource for the purposes of CEQA. Although no archaeological resources were observed during the field survey, the project site may contain unknown subsurface archaeological resources. LSA recommends that all ground-disturbing activities within the project area be monitored by a qualified archaeologist. Following completion of the construction monitoring, a Report of Findings shall be prepared consistent with requirements of the (ARMR) Contents and Format Guidelines.

If project plans change to include grading outside the existing project area, it is recommended that a qualified archaeologist complete an additional assessment for the area.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified of

the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the descendant may inspect the site of the discovery. The descendant shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If cultural materials are discovered during any excavation, a qualified archaeologist must be notified to assess the significance of such materials.

REFERENCES

Bean, Lowell John and Charles R. Smith
1978 Gabrielino. In R. Heizer ed., Handbook of North American Indians, Vol. 8, California, pp. 538-549. Washington D.C.: Smithsonian Institution.

Bean, Walton
1968 *California: An Interpretive History*. New York: McGraw-Hill. (Reprinted, McGraw-Hill, New York, 1973).

Bolton, Herbert Eugene
1927 *Fray Juan Crespi: Missionary Explorer on the Pacific Coast, 1769–1771*. Berkeley: University of California Press. (Reprinted, AMS Press, New York, 1971).

Boscana, F. G.
1933 Chinigchinich: A Revised and Annotated Version of Alfred Robinson's Translation of Father Geronimo Boscana's Historical Account of the Belief, Usage, Customs, and Extravagancies

City of Hermosa Beach
1957 History of Hermosa Beach. The Daily Breeze. September 27. City of Hermosa Beach 2004 <http://www.hermosabch.org/about/history/brezhist.html>

Gudde, Erwin G.
1998 California Place Names. University of California Press. 4th Edition. Revised by William Bright.

Hatheway, Roger
1983 Cultural Resources Assessment of the General Plan and Zone Changes for the Hermosa Beach School District Properties, Hermosa Beach, California. On file South Central Coastal Information Center, California State University, Fullerton.

HRI
2004 *Historic Resources Inventory*. On File at the South Central Coastal Information Center, California State University, Fullerton

McCawley, William
1996 The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, California: Malki Museum Press and Ballena Press.

Oxendine, Joan
1983 The Luiseño Village During the Late Prehistoric Era. Ph.D. Dissertation, University of California, Riverside.

Rhein, Fern
1933 History of Hermosa Beach. Online. City of Hermosa Beach. < http://www.hermosabch.org/about/history/fernhist.html>

U. S. Geological Survey (USGS)
1963 *Redondo Beach* 7.5' Quadrangle. Edited and photorevised in 1981. U. S. Geological Survey, Denver, Colorado, 80255.

Wagner, Henry R.
1941 Juan Rodriguez Cabrillo: Discoverer of the Coast of California. San Francisco: California Historical Society.

Weinroth, Orna
1994 *National Indian Policy Center (NIPC) List of Federally Recognized Native American Tribes*. Ms. available on E-mail: Orna@gwis.circ.gwu. edu.

White, Raymond C.
1963 Luiseño Social Organization. University of California Publications in American Archaeology and Ethnology 48(2):91–194

State of California ¾ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

 *Resource Name or #: Redondo Beach Generating Station

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 15W**; **Sec 01; and R 14W, Sec 06 and 07**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370743.575162, 3746668.499752 (NW corner); 371099.341659, 3746802.434182 (NE corner); 371194.683916, 3746122.203833 (SE corner); 371027.416554, 3746070.223487 (SW corner)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel numbers 7503-013-015, 7503-013-014, 7503-013-819, and 7503013820

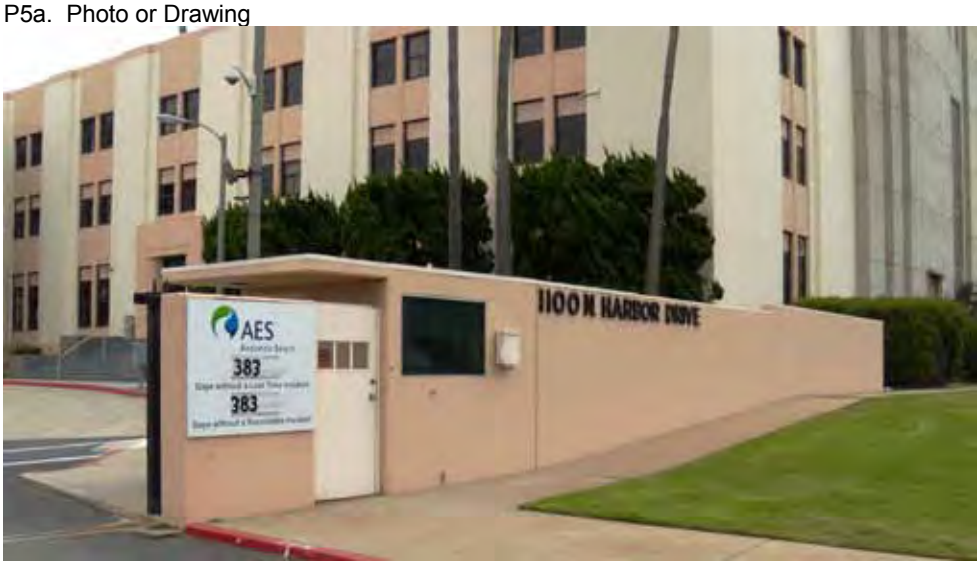
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Redondo Beach Generating Station (RBGS) is located on N. Harbor Drive, just east of the King Harbor Marina and the Pacific Ocean, in the City of Redondo Beach, California. The plant was constructed by Southern California Edison Company and began operation in 1948; components have various dates from 1948 to 1968. RBGS is composed of eight power generating units (four operating power units and four retired units), a standby boiler, an administration building, a guard house, five smoke stacks, a switchyard, transmission line towers, and various support facilities such as water tanks, a fuel pump house, a service water house, a paint shop, a switchyard oil transfer system building, garages, and a gas service building. The district is irregularly shaped and encompasses the RBGS property, approximately 50 acres. The district boundaries are the parcel boundaries of the four contiguous parcels that make up the RBGS property (parcel numbers 7503013820, 7503013819, 7503013015, 7503013014). It is roughly bounded by N. Harbor Drive, Herondo Street, N. Francisca Avenue, N. Catalina Avenue, and Beryl Street. The boundaries include all of the relevant features of the RBGS.This large and complex industrial site is being recorded as a district.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ¨ Building ¨ Structure o Object o Site ý District o Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: View looking southeast at entry and guard shack, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic
o Prehistoric o Both
1948 to 1968
Source: AES Redondo Beach, LLC (property owner)

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 6, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

D1. Historic Name: Redondo Beach Generating Station D2. Common Name: same

***D3. Detailed Description**: The district is composed of the features of the Redondo Beach Generating Station (RBGS), a natural gas-fired steam electric generating facility located on N. Harbor Drive, just east of the King Harbor Marina and the Pacific Ocean, in the City of Redondo Beach, California. The station was designed on the unit principle, with each boiler serving a single turbine generator. RBGS was constructed by Southern California Edison Company and began operation in 1948; components have various dates from 1948 to 1968. RBGS is composed of eight operational steam generating power units (four operating power units and four retired units), and has a once-through cooling system that is ocean fed with an offshore intake and outfall. Units 5–8 are operational, and Units 1-4 have been retired but remain on the facility property. The first unit came online February 26, 1948. The second and third units became operational in April and August of that year, and the fourth unit in October 1949. Units 5 and 6 were constructed in 1956, and Units 7 and 8 in 1968 (Gnerre 2011).

The entrance to RBGS is from N. Harbor Drive, near the northwest corner of the property. The property is surrounded by fencing and the guard house is located at the entry. On the front (west) and north sides the fence is a concrete wall. Part of the rear (east) side and the south side have a high chain link fence with barbed wire across the top. The Administration Building is located just beyond the entrance, with a large paved parking lot to the north. Plant 1, with the original units (Units 1-4), is connected to the south wall of the Administration building, oriented north/south along the west edge of the property (see Plant Layout map). Plant 2 with Units 5 and 6 is located south of Plant 1, and Plant 3 with Units 7 and 8 is located south of Plant 2. The traveling screens and circulating water pumps are located west of Plant 2. To the south of Plant 3 is the footprint of where the largest of five fuel oil tanks has been removed. The footprints of the other four fuel oil tanks, also removed, run in a line north to south along the east side of the RBGS property. South of Plant 2 is the primary fuel pump house. Northwest of the pump house is the remaining shell of the foam pump house. Towards the northeast corner of the property is the 220Kv switchyard, with a small control house. West of the switchyard is the service water house. Southwest of the service water house is the gas service structure. Between the gas service structure and Plant 1 is the original switchyard. Along the north edge of the original switchyard are the the switchyard oil transfer building, the paint shop, and the distilled water tanks with their two associated sheds. North of this area is a maintenance building referred to as the Stone and Webster building, and north of that are three covered parking structures.

Most of the property is paved. There is a landscaped area in front of the Administration Building, and lawn outside the fence along N. Harbor Drive. A commemorative marker for the Old Salt Lake is located just north of the entry drive, near the sidewalk along N. Harbor Drive. The area where the five tanks were removed remains unpaved. There is also a small undeveloped natural area at the southeast corner of the property. The eight units and their supporting equipment have been continuously maintained and upgraded since their construction. (See continuation sheet, page 3)

***D4. Boundary Description** (Describe limits of district and attach map showing boundary and district elements.): The district is irregularly shaped and encompasses the RBGS property, approximately 50 acres. The boundaries are the outer parcel boundaries of the four contiguous parcels that make up the RBGS property (7503013820, 7503013819, 7503013015, 7503013014). It is roughly bounded by N. Harbor Drive on the west, Herondo Street on the north, N. Francisca Avenue and N. Catalina Avenue on the east, and a Best Western Hotel and the Salvation Army facilities on Beryl Street on the south.

***D5. Boundary Justification:** The boundaries include all of the relevant features of the RBGS. The boundary excludes the two parcels on the west side of N. Harbor Drive that contain the former pump house that now houses the SEA Lab coastal science education center, operated by the Los Angeles Conservation Corps. As it is now a distinctly separate entity from the power plant, it is not included in the district boundaries.

***D6. Significance: Theme:** Electric Power Generation **Area:** Southern Coastal California
Period of Significance: 1948 - 1968 **Applicable Criteria:** CRHR

The RBGS does not appear to be a historic resource for the purposes of CEQA. The power plant, primarily built between 1948 and 1968, is not associated with events that have made a significant contribution to the history of the local area, region or state (Criterion A and 1). The facility does not appear to be associated with a person who made significant contributions to local, state or national history (Criterion B and 2). The buildings and structures do not embody characteristics of a type, period, region or method of construction. They are not the work or a master and do not have high engineering value (Criterion C and 3). The buildings and structures are not likely to yield information important to understanding prehistory or history and information on the facility is recorded elsewhere (Criterion D and 4). This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and does not appear to be a historical resource for the purposes of CEQA. (See Continuation Sheet, page 6)

***D7. References**: See continuation sheet, page 7

***D8. Evaluator:** Lori D. Price **Date:** June 6, 2012
Affiliation and Address: CH2MHILL - 6 Hutton Center Dr., Suite 700
Santa Ana, CA 92707

***Recorded by:** Lori D. Price ***Date:** June 6, 2012 ý Continuation o Update

***D3. Detailed Description continued**: The station is arranged into three plants; Plant 1 has Units 1 through 4, Plant 2 has Units 5 and 6, and Plant 3 has Units 7 and 8. Each unit consists of a boiler, turbine, and generator. Each plant has a control system and associated auxiliary equipment necessary to generate electric power. Auxiliary equipment includes condensate and feedwater piping, pumps and heaters, generator cooling systems, fuel delivery systems, boiler lancing systems, instrumentation, and circulating water system and pumps. These units use natural gas as their fuel source.

Shared systems or those that provide service to the entire station include closed equipment cooling water systems, condenser cooling water systems (including ocean intake/outfall systems), fire protection systems, irrigation and general use water systems, air compressor systems, water treatment systems, lubricating oil storage and filtration systems, water purification systems and storage, chemical storage and delivery systems, station-specific communications systems, and switchyard equipment. Facilities also include an administration building, parking structures, and a maintenance shop.

***D6. Significance continued: Theme:** Electric Power Generation **Area:** Southern Coastal California
Period of Significance: 1948 - 1968 **Applicable Criteria:** N/A

General History of Steam Plants in California

Steam-powered turbines remain the principal technology used to generate electricity in the United States, accounting for nearly three-quarters of the total annual output (Tetra Tech 2008). When extracting electricity from steam, waste heat must be removed from the system. The most basic approach to remove waste heat is to circulate large volumes of water through a condenser and back to the water body, where the heat is dispersed to the surrounding environment. This is known as a single-pass, or once-through, system and is the most commonly used cooling method. This is the system used at the HBGS. There are currently more than 1,200 steam-generating units using this cooling method in the United States, including 18 in California. These are primarily found in southern California and withdraw cooling water directly from the Pacific Ocean or nearby estuaries. The average age of these California coastal fossil fuel facilities is 40 years (Tetra Tech 2008).

The first commercial central electrical generating stations were the Pearl Street Station in New York and the Holborn Viaduct power station in London, both of which opened in 1882 (Parsons 1940). Both of these stations used reciprocating steam engines, but the development of the steam turbine allowed larger and more efficient central generating stations to be built. Turbines offered higher speeds, more compact machinery, and stable speed regulation.British designer Sir Charles Parsons built the first multi-stage reaction steam turbine in 1884 and patented it in 1885 (Cambridge 2000). Almost immediately he and others began making improvements upon his original concept. By 1893 Parsons had a 300-kilowatt turbine generator (Skrabec 2007). George Westinghouse, Jr. bought the U.S. rights to the Parsons turbine in 1896, and improved the Parsons technology and increased its scale (Skrabec 2007). In 1903 Aegidius Elling of Norway built the first successful experimental gas turbine that was able to produce more power than it needed to run its own components. It used both rotary compressors and turbines, and is recognized as the first applied method of injecting steam into the combustion chambers of a gas turbine engine (Encyclopaedia Britannica 1995). By the beginning of the twentieth century, power plants with steam turbines began to replace the original steam engine power plants, and turbines entirely replaced reciprocating engines in large central stations after about 1905 (Parsons 1940). In less than thirty years, the technology of engines capable of supplying power and electricity had improved greatly.

In the early stages of steam turbine power plant development , the materials needed to withstand the high temperatures of modern turbines were not yet available. Technology and improvements for steam turbine engines continued to advance throughout the 1920s and 1930s, leading to a generation of more efficient turbine power plants in the 1950s.

In 1920, hydroelectric power accounted for 69% of all electrical power generated in California. By 1930, that figure had risen to 76%; by 1940 it was up to 89% (Williams 1997; Herbert and Brookshear 2006). But after 1941, new thermal or steam-electric generating units accounted for most of the new power capacity in the state. By 1950, hydroelectricity accounted for only 59% of the total, falling to 27% in 1960 (Williams 1997; Herbert and Brookshear 2006).

Pacific Gas & Electric Company (PG&E) and Southern California Edison (SCE), California's largest electrical utility providers, made efforts to build large-scale steam generation plants as early as the 1920s. James Williams, a historian of energy policies and practices in California, noted that the decision by PG&E and SCE to build steam plants in the 1920s may be attributed to three things. First, a persistent drought in California from 1924 through the mid-1930s caused the major utilities to question the viability of systems that relied heavily on hydroelectricity. Second, new steam generation power plants on the East Coast were achieving far greater efficiencies than had previously been possible. Between 1900 and 1930, for example, the fuel efficiency of steam plants, measured in kilowatts per barrel of oil, increased more than nine-fold. Third, new natural gas lines were completed in the late 1920s that could bring new gas supplies to both northern and southern California from the San Joaquin Valley (Williams 1997).

SCE began constructing its steam generation plant at Long Beach on Terminal Island in 1911. The Los Angeles Department of Water and Power (LADWP) constructed a steam station at Seal Beach consisting of two units installed in 1925 and 1928. PG&E built a steam plant in Oakland in 1928. In 1929, the Great Western Power Company (which was absorbed by PG&E in 1930) built a large steam plant on San Francisco Bay, near the Hunters Point shipyard (Herbert and Brookshear 2006).

***Recorded by:** Lori D. Price ***Date:** January 23, 2012 ý Continuation o Update

The years following World War II were a time of expansive growth in Southern California. The population swelled in response to business and industrial development. Housing expanded into formerly agricultural areas, creating suburbs around Los Angeles and San Diego. The increased population and industry made greater power generation crucial and California's utility providers expanded their capacity to meet the demand. At this point, most of the more favorable hydroelectric sites in California had already been developed, and as previously noted, the viability of hydroelectricity had been called into question during the drought of the 1920s and 1930s. The technology of steam generation had progressed and abundant natural gas resources to help run them were now available. "Steam turbine power plants were cheaper and quicker to build than hydroelectric plants, so utilities companies moved away from hydroelectricity, establishing steam turbine power as the generator of choice" (Herbert and Brookshear 2006). The "momentum for steam had been established by war, by drought, and by a positive history of increased thermal power plant development" (Williams 1997).

Starting in the 1950s, dozens of new steam generation plants were built throughout California. In a detailed article in 1950 in *Civil Engineering*, I. C. Steele, Chief Engineer for PG&E, summarized the design criteria of four major steam plants the company had under construction at that time: Moss Landing, Contra Costa, Kern, and Hunters Point in San Francisco. The criteria were the same in all cases: build the facility close to load centers to reduce transmission costs, close to fuel supplies, near a water supply, and on a site where land was inexpensive and could support a good foundation (Steele 1950; Herbert and Brookshear 2006).

Between 1950 and 1970 steam generating capacity in California saw its greatest expansion. During this period, SCE built a series of similar steam plants in the Los Angeles Basin and in San Bernardino County. In 1953, the Etiwanda plant went online, followed in 1955 by El Segundo, Alamitos and Plant No. 2 at Redondo Beach in 1956, and Huntington Beach and Mandalay in 1958. By 1960, all SCE plants either had multiple units or had additional units in the planning stages. In 1950, PG&E operated 15 steam electric plants in California. Between 1950 and 1960 they added several new plants and expanded older ones. Chief among these were Contra Costa (1951-53), Moss Landing (1950-52), Morro Bay (1955), Hunters Point (addition 1958), Humboldt Bay (1956-58), and Pittsburg (1959-60) (Herbert and Brookshear 2006).

Although SCE and PG&E were the major players, smaller utility companies also grew their facilities. The LADWP system consisted of five steam electric power plants by 1962: Seal Beach Plant (1925-28), Harbor Plant on Los Angeles Harbor (1943), Valley Plant in the San Fernando Valley (1954), Scattergood (1958), and Haynes (1961). San Diego Gas & Electric Company had three steam electric power plants by 1960: Silver Gate (1943), Encina (1954), and South Bay (1960). By the late 1970s, there were more than 20 fossil fuel thermal plants in California, clustered around San Francisco Bay, Santa Monica Bay, and in San Diego County, along with a few interior plants in San Bernardino, Riverside, and Imperial counties, as well as a few plants on the Central Coast (Herbert and Brookshear 2006).

Southern California Edison Company

The history of the Southern California Edison Company (SCE) dates to 1886, when a company called Holt and Knupps illuminated Visalia, California, with street lights. They became known as Visalia Electric Light & Gas Company, the earliest of several companies that became SCE (Edison International 2012). In 1896 a group of investors, including Elmer Peck and George Baker, established the West Side Lighting Company to provide electricity to Los Angeles and bought the franchise to operate the city's power system (Edison International 2012; Myers 1983). But that same year the city passed an ordinance prohibiting most overhead line construction, because the city streets had become a maze of overhead lines (Lundsten and Flick 2012). The ordinance established the "conduit district" in which new wiring had to be laid underground (Myers 1983). West Side Lighting decided that the best technology available was the Edison three-wire conduit technology, and this technology was needed to continue to grow their business. But Los Angeles Edison Electric, formed in 1894, owned the rights to the Edison name and patents (Lundsten and Flick 2012). The two companies came together and formed Edison Electric Company of Los Angeles in 1897 (Slade et al 2012). Edison Electric then purchased several smaller utility companies, including Visalia Electric Light & Gas Company, San Bernardino Electric Company, Santa Barbara Electric Light Company, and Ventura Land & Power. They also began to build new plants and transmission lines, and became the first company to install Edison-type DC-power underground conduits in the Southwest. The Los Angeles No. 2 substation opened in 1898, distributing power throughout the City of Los Angeles via the new conduit system (Myers 1983). Continuing to expand, they purchased the Southern California Power Company that same year (Myers 1983).

In 1899 their Santa Ana River No. 1 hydroelectric plant began operation, transmitting power to Los Angeles over the Santa Ana River Line, at the time the world's longest power line at 83 miles long (Edison International 2012) . The power line was the first to use "transposition" technology which has been used ever since for long-distance transmission lines (Myers 1983). In 1907 the company surpassed this achievement when their Kern River-Los Angeles Transmission Line began operation. At 118 miles and 75 kV, it was the world's longest, and highest voltage power line and the first transmission line in the nation to be supported entirely by steel towers (Edison International 2012) . The company continued to expand and on July 6, 1909, changed its name from Edison Electric Company of Los Angeles to Southern California Edison to reflect its expanded service area (Edison International 2012).

In 1917, SCE purchased the Pacific Light and Power Company, the Ventura County Power Company, and the Mount Whitney Power & Electric Company, making it the fifth-largest central-station power company in the United States (Slade et al 2012). The acquisition of Pacific Light & Power gave SCE the Big Creek Project, at the time the world's largest hydroelectric plant, energized in 1913 (Edison International 2012). By 1929 the eight powerhouses at Big Creek generated a total of 360,000 kilowatts, half of SCE's total power capacity (Slade et al 2012).

In 1912 the City of Los Angeles decided to develop its own power distribution system, known as the Los Angeles Department of Water and Power (LADWP). It was enshrined in the Charter of the City of Los Angeles in 1925, and by 1939 had become the sole general distributor of electric energy in Los Angeles (Lundsten and Flick 2012). SCE had to sell its Los Angeles distribution system to the Los Angeles City Council in 1922 (Slade et al 2012). But it continued to grow outside of the city limits, expanding its steam plants in Long Beach during the 1930s to include eleven new generators (Slade et al 2012).

After World War II, SCE grew substantially and installed its one millionth meter in 1951 (Slade et al 2012). By the early 1950s Edison was the fifth-largest investor-owned power company in the United States. Its service area covered 18,500 square miles and contained about 225 communities with a combined population of almost three million. SCE built 11 fossil-fuel powered stations between 1948 and 1973. They also expanded into nuclear power. In July 1957, at the Santa Susana Experimental Station, SCE became the first investor-owned utility to generate non-military nuclear power (Slade et al 2012). They broke ground on the San Onofre Nuclear Generating Station in 1963, and it began operation in 1968 (Edison International 2012). In January 1964 the California Electric Power Company, which served 450,000 people, merged with SCE (Slade et al 2012).

In 1988 SCE formed a parent holding company, which became known as Edison International in 1996. SCE sold the RBGS to AES Corporation/AES Redondo Beach, LLC in 1998.

Founded in 1981, the AES Corporation built its first power plant in 1985 in Texas. They now operate on five continents and in 27 countries. They engage in power generation and distribution, and also operate utility companies. AES California operates three power plants: AES Huntington Beach, AES Redondo Beach, and AES Alamitos. The power they generate is sold to SCE for distribution in the Los Angeles basin.

Redondo Beach Generating Station

Henry Huntington formed the Pacific Light and Power Company in 1902 to provide steam-generated electricity to run the streetcars of his Los Angeles Railway Company (Gnerre 2011). The success and growth of the railway, and the resulting population increase in the area, created a demand for more power. Pacific Light and Power decided to build a new steam-generated electric power plant, sited between the ocean and the old salt lake in Redondo Beach. The plant occupied part of the site of the current RBGS. "In March 1906, a contract was awarded for the construction of a large $1.25 million steam-generated electric power plant in Redondo Beach. At the time, it was described as the largest steam-power plant to be built west of Chicago" (Gnerre 2011). Construction began in May 1906, and the plant was operational by early 1907. To keep up with demand, the plant expanded in 1910 (Gnerre 2011). In November 1913, a water pipe at the plant burst, flooding the facility and crippling many of the city's streetcars. This helped spur the decision to switch to using power from the large, new hydroelectric plant at Big Creek, CA. As Pacific Light and Power began to rely more heavily on hydroelectric generation, the Redondo Beach plant was placed on standby.

Pacific Light and Power continued to grow – by 1913 it was providing 20 percent of the power to the City of Los Angeles as well as power for other cities in the San Gabriel Valley (Friedricks 1987). In 1917 Pacific Light and Power was purchased by SCE, including the Redondo Beach plant, but the plant was only used as a back-up facility. In 1933 the Redondo Beach plant was shut down, and the machinery was dismantled in 1935. The buildings and smokestacks remained until they were demolished in August 1946 (Gnerre 2011).

In 1946, SCE announced that it would build a new plant on the Redondo Beach site, at a cost of $38 million. The contract was awarded to the firm of Stone & Webster, and the first unit came online February 26, 1948. The second and third units became operational in April and August of that year, and the fourth unit in October 1949 (Gnerre 2011). These are the original four units that make up Plant 1. To keep up with the huge population growth of southern California in the 1950s and 1960s, SCE expanded the plant twice. Units 5 and 6 (Plant 2) were constructed in 1956, and Units 7 and 8 (Plant 3) in 1968 (Gnerre 2011).

Since its construction, the facility has seen numerous changes. The facility was originally designed and built as dual fuel steam boilers (fuel oil and natural gas). By the late 1980s, the plant was converted to natural gas only. AES acquired the RBGS plant from SCE in 1998, and they signed an agreement with the city of Redondo Beach to downsize the plant. Under this agreement, all but two of the eight units were to be removed. Starting in 1999, AES began to dismantle some of the facility and removed three of the exhaust stacks. In 2006 four fuel tanks on the property were removed. Currently the plant contains four operating power units, four retired units, and a standby boiler (Morino 2011)..

As noted above, SCE built 11 fossil-fuel powered stations between 1948 and 1973. RBGS was one of several similar steam generating plants constructed during this time.

Evaluation

The RBGS does not appear to be a historic resource for the purposes of CEQA. The generating station does not appear to be significant in the context of the history of SCE, the history of steam generation of electricity, or the history of post-World War II steam generation plants (Criterion A and 1).

As discussed above, RBGS was one of several steam generating plants built by SCE in the mid-twentieth century. It was part of a trend for all electric companies in California to build steam generation plants to keep up with growing demand from new development and higher customer usage. The short time-frame for construction of these plants, and their similar technologies and designs, suggests that they were all being planned and designed at about the same time. These plants and their steam generation technology were the result of the exhaustion of available hydroelectric sites coinciding with a growing need for electricity. Together, the plants impacted the nature of power generation in southern California, overshadowing the importance of any single plant. As of 2008, 21 once-through cooling, steam generation units remained in southern California, including RBGS, all dating from the same general time period, with an average age of 40 years. More than 1,200 steam-generating units use this cooling method in the United States (TetraTech 2008). Placed in the context of the time and of other power plants, RBGS does not appear to be unique.

RBGS does not appear to be associated with the life of a historically significant person (Criterion B and 2), nor is it significant under Criterion D and 4 as a potential source of data on human history. This property is well-documented through company records and construction documents and does not appear to be a principal source of important information. The plant has had minor alterations, yet as a whole it retains integrity of location, design, setting, materials, workmanship, feeling, and association.

This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and does not appear to be a historical resource for the purposes of CEQA.

***D7. References**:

AES. 2012. "About Us – History." http://www.aes.com/aes/index?page=history Accessed February 1, 2012.

Brown, Joan and Maxon , Patrick. 2010*. Phase 1 Cultural Resources Assessment for the Poseidon Seawater Desalination Project, Huntington Beach, Orange County, California*. BonTerra Consulting.

Cambridge University Engineering Department. 2000. *125 Years of Engineering Excellence*. www-g.eng.cam.ac.uk/125/noflash/1875-__1900/parsons.html Accessed January 30, 2012.

Edison International. 2012. "History." http://www.edison.com/ourcompany/history.asp Accessed January 31, 2012.

Encyclopaedia Britannica. 1995. "Energy Conversion." http://www.uv.es/EBRIT/macro/macro_5002_13_113.html Accessed January 30, 2012.

Friedricks, William B. 1987. "Henry E. Huntington and Metropolitan Entrepreneurship in Southern California, 1898-1917." University of Southern California. *Business and Economic History*, Second Series, Volume Sixteen, 1987. Board of Trustees of the University of Illinois. Library of Congress Catalog No. 87-72645. Accessed May 16, 2012. http://www.thebhc.org/publications/BEHprint/v016/p0199-p0204.pdf

Gnerre, Sam. 2011. "Redondo Beach's Power Plants." *South Bay History*. Accessed on May 16, 2012. http://www.insidesocal.com/history/2011/10/redondo-beachs-power-plant.html

Herbert, Rand and Brookshear, Cheryl. 2006. State of California Building, Structure, and Object Record for Highgrove Generating Station. November 2006.

Huntington Digital Library. 2012. Southern California Edison Photographs and Negatives. http://hdl.huntington.org/cdm/search/collection/p16003coll2/searchterm/redondo%20beach%20generating%20station/order/nosort. Accessed May 2012**.**

Lundsten, Apryl and Flick, Eileen. 2012. "Plugged In: The History of Power in Los Angeles." http://www.usc.edu/libraries/archives/la/historic/power/ Accessed February 1, 2012.

Morino, Douglas. 2011. "AES plans to rebuild Redondo Beach power plant." *Daily Breeze*. October 5, 2011. Accessed on May 16, 2012. http://www.dailybreeze.com/ci_19015819

Myers, William A. 1983. *Iron Men and Copper Wires: A Centennial History of the Southern California Edison Company*. Glendale, California: Trans-Anglo Books.

Parsons, R.H. 1940. *The Early Days of the Power Station Industry*. Cambridge (Eng.): University Press. New York: The Macmillan Company.

Skrabec, Quentin R. Jr. 2006. *George Westinghouse: Gentle Genius*. New York: Algora Publishing.

Slade, Liz, Jennifer Moore, Nora Brennan Morrison, and Jeff Cronin, Lehman Brothers Collection project staff. 2012. "Southern California Edison Company," Harvard Business School, Baker Library, Historical Collections. Lehman Brothers Collection – Contemporary Business Archives. http://www.library.hbs.edu/hc/lehman/chrono.html?company=southern_california_edison_company Accessed January 31, 2012.

Steele, I. C. 1950. "Steam Power Gains on Hydro in California," *Civil Engineering* (January 1950): 17-21

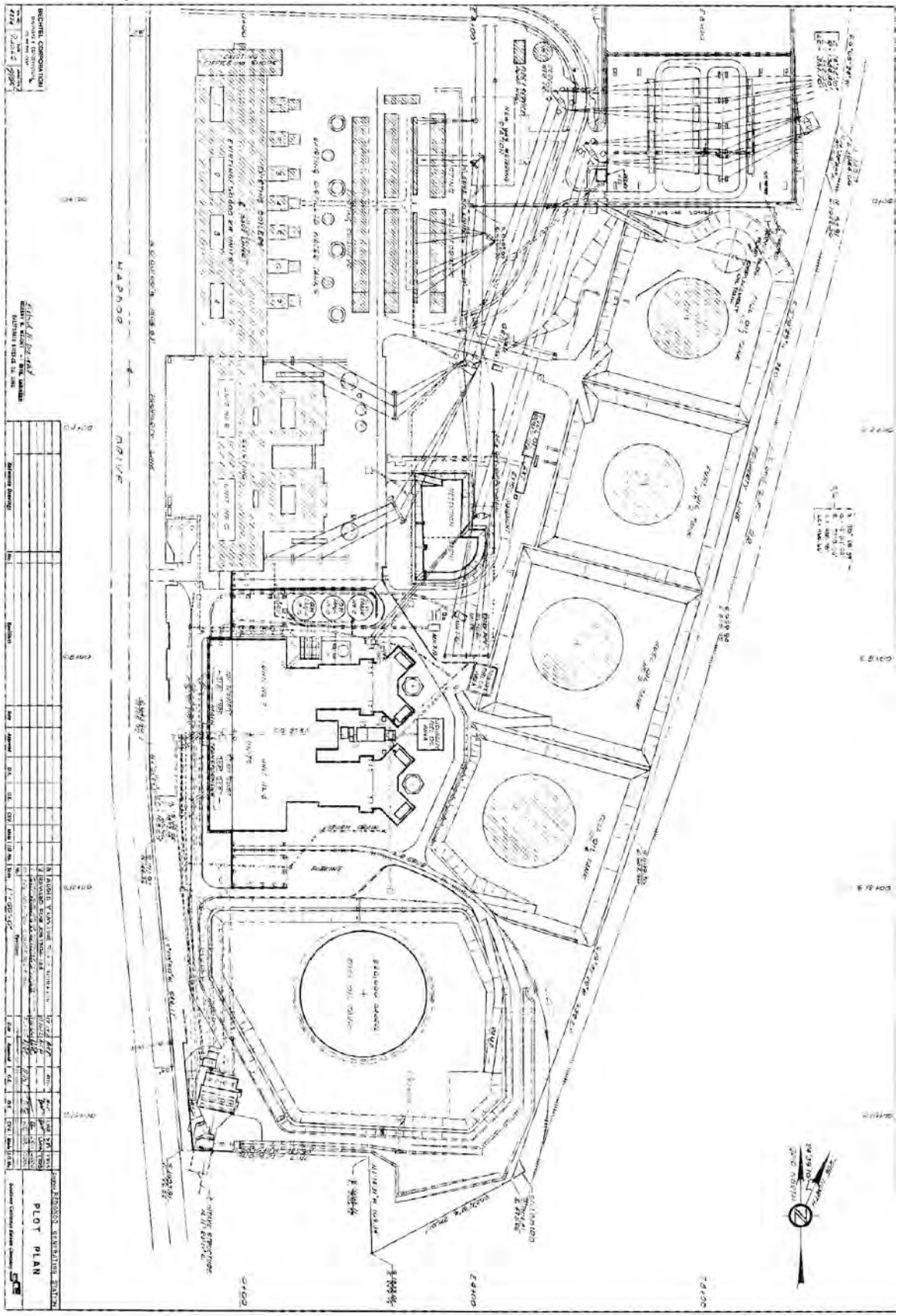
Tetra Tech, Inc. 2008. *California's Coastal Power Plants: Alternative Cooling System Analysis.* Prepared for California Ocean Protection Council, Oakland, CA. February 2008.

Williams, James C. 1997. *Energy and the Making of Modern California.* Akron, Ohio: University of Akron Press.

Plant overview looking south; gas service in foreground. Showing all five remaining exhaust stacks.

Plant overview looking NW from N. Catalina Avenue. South section of “Whaling Wall” at left.

***Recorded by:** Lori Durio Price ***Date:** June 6, 2012 ý Continuation o Update



***Recorded by:** Lori Durio Price ***Date:** June 6, 2012 ý Continuation o Update

Location Map
Redondo Beach Generating Station
AES Redondo Beach Energy Project
Redondo Beach, CA

CH2MHILL

\\ZION\SACGIS\PROJ\AES\MAP FILES\REDONDO_BEACH\CULTURAL\REDONDO_CULTURAL_DPR_AERIAL.MXD KMINO 6/7/2012 10:43:22 AM

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #: Redondo Beach Generating Station – Administration Building**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 15W**; **Sec 01**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Administration building for RBGS is located just inside the entrance to the facility, in the northwest corner of the property. It dates from 1948, built at the same time as Plant 1, which is attached to the rear (south) wall. The front of the building has a circular paved driveway and mature landscaping. The building is three stories over a full basement, with a rectangular footprint. Designed in the Classical Moderne style, it is masonry construction with a painted concrete exterior. It has a flat roof behind a simple parapet. The façade (north elevation) is broken up into seven bays by wide pilasters. The center bay contains the entry, which is marked by a massive concrete surround that features curved, reeded corners where it meets the recessed doorway. Above the doorway are incised the words "REDONDO STEAM STATION." The doorway is a replacement and has a pair of glazed doors surmounted by a large, fixed transom. These are modern tinted glass in an anodized aluminum frame, typical of modern commercial entries. Massive concrete steps with wide plinths on each side access the door. Above the entry, the second and third floors each have a pair of windows. All other six bays have the same pair of windows on the first, second, and third floors. This rhythm of paired windows per bay extends down to the basement level. All windows have been replaced with modern aluminum windows with tinted glass, with a two-light sliding window topped by a single-light fixed transom. In addition, all windows on the first and second floors have also been shortened, with the top portion of the opening filled in. Originally, the first floor windows were the largest with 14 lights, the second floor windows had 10 lights, and the third floor had 8 lights. All were metal windows with hopper sashes. The west elevation faces N. Harbor Drive and also has a pair of windows on each floor. On the east elevation the third floor windows have been filled in, and this elevation also has a pedestrian door on the north end. There is also a small structure on the rooftop, centered on the building and set back towards the south side. It has a flat roof and appears to be for roof access.

(continued on page 2)

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure ý Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southwest, front elevation, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph ca 1956

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ý Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

***Recorded by:** Lori D. Price ***Date:** June 18, 2012 ý Continuation o Update

At the northwest corner of the building is a masonry wall that extends west and then turns north, forming the west wall of the guard station when it nears the driveway entry. The guard station is a small, one story, masonry building that dates from 1948. It has flat roof with a deep overhang on the north elevation, which is the location of the main entry. The east elevation has another door and a two-light, sliding sash, metal window. The west elevation has a large, fixed, plate glass window that replaced the original small rectangular window that was there. A metal door with a row of three windows fills the opening in the perimeter wall between the guard station and the driveway. The driveway originally had a pair of ornate metal gates featuring a design that was emblematic of electrical bolts.

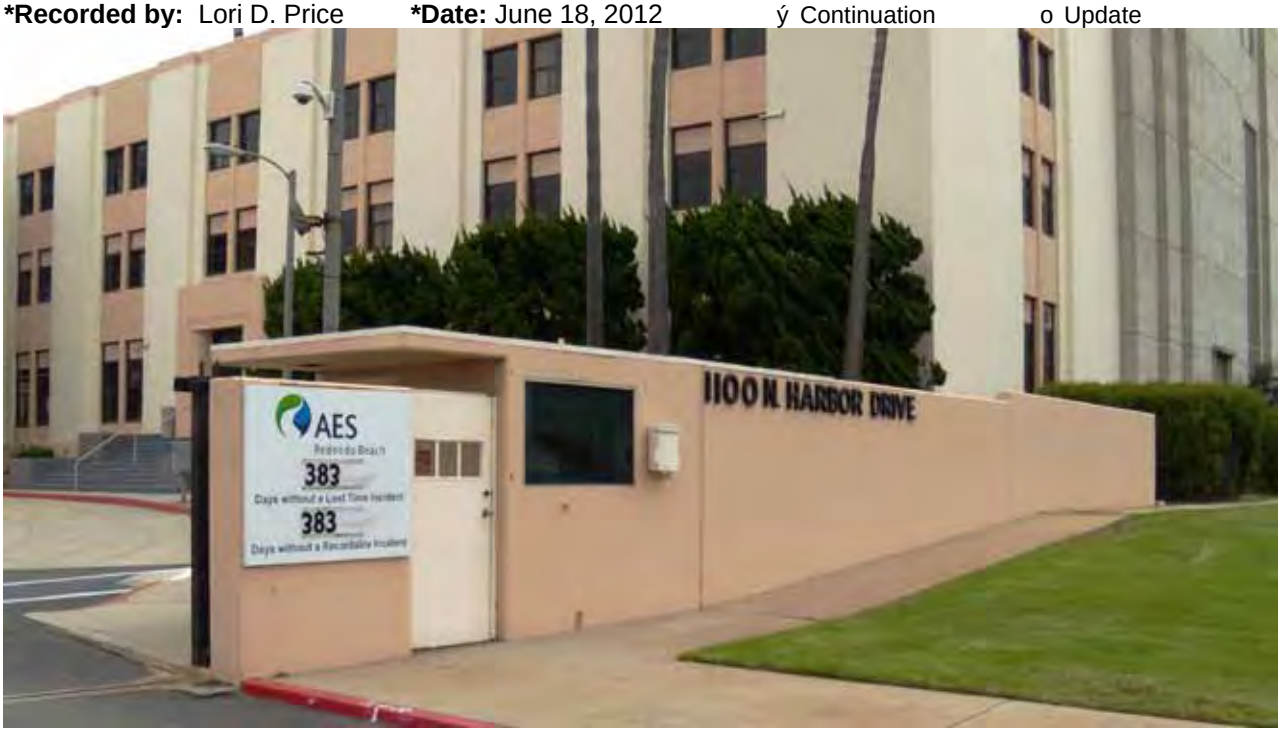
In front of the guard station (to the west), at the corner of the driveway and N. Harbor Drive, is a granite plinth historical marker for the old salt lake. It reads "This marker locates the site near which the Indians and early California settlers came to obtain their salt, which at many times was more valuable than gold. Presented by Tierra Del Rey Parlor #300 Native Daughters of the Golden West. March 27, 1955."

Alterations to the Administration Building

The primary alteration is the replacement of all of the windows, and the shortening of most of the window openings. In addition, the entry doors have been replaced. A pipe railing has been added to the center of the entry stairs, as well as a guard rail around the basement openings. The exterior concrete walls of the building have been painted, although the exterior of Plant 1, attached to the rear, remains pristine. A large picture window has been added to the guard station, and the ornamental gates at the driveway entry have been removed.

Guard station, view looking SW

***Recorded by:** Lori D. Price ***Date:** June 18, 2012 ý Continuation o Update

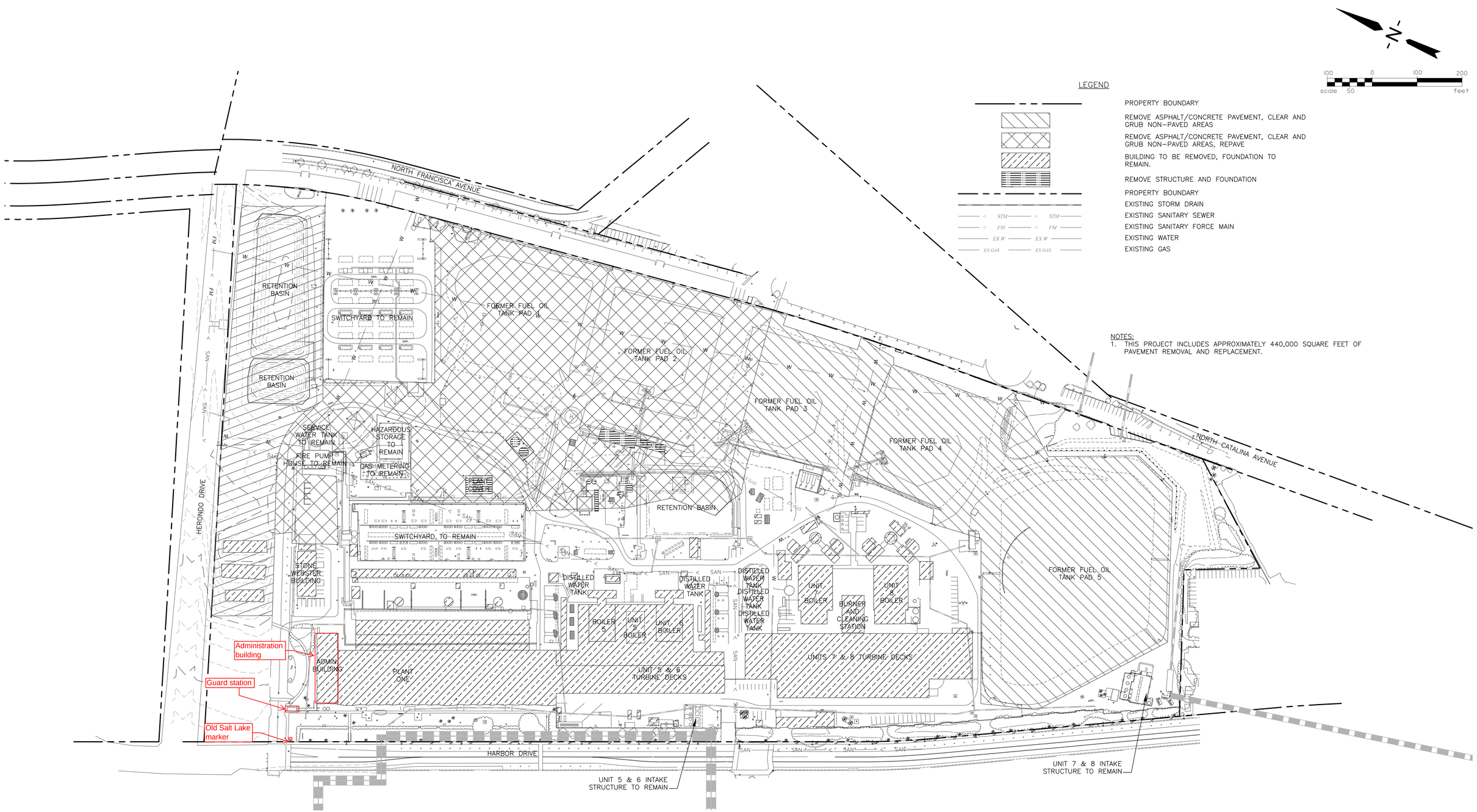


Administration building and guard station, view looking SE

Old Salt Lake marker, view east

PRE_119487

NOT FOR CONSTRUCTION



NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #: Redondo Beach Generating Station – foam pump house**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The foam pump house is located just west of the site of the former fuel oil tank #2 and just northwest of the primary fuel pump house. It appears in an aerial photo from around 1956, and likely dates to 1948, to the construction of Plant 1. It housed foam pumps that were part of the fire-fighting system at the facility. Fire service is now provided by the City of Redondo Beach, and these pumps are no longer used. All of the siding and roofing of the building, which was likely asbestos, has been removed. All that remains is the framing, front doors, and some interior equipment. The building is one story and has a rectangular footprint with a concrete foundation. It has a side gable roof. The exposed framing is steel. The entry doors, located on the north elevation, are a pair of metal doors, each with four fixed lights. The building appears to have had a small accessory building immediately to the east, but all that remains of that structure is the metal framing also.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southeast – primary fuel pump house is visible at far right, and framing of accessory bldg is at left - September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

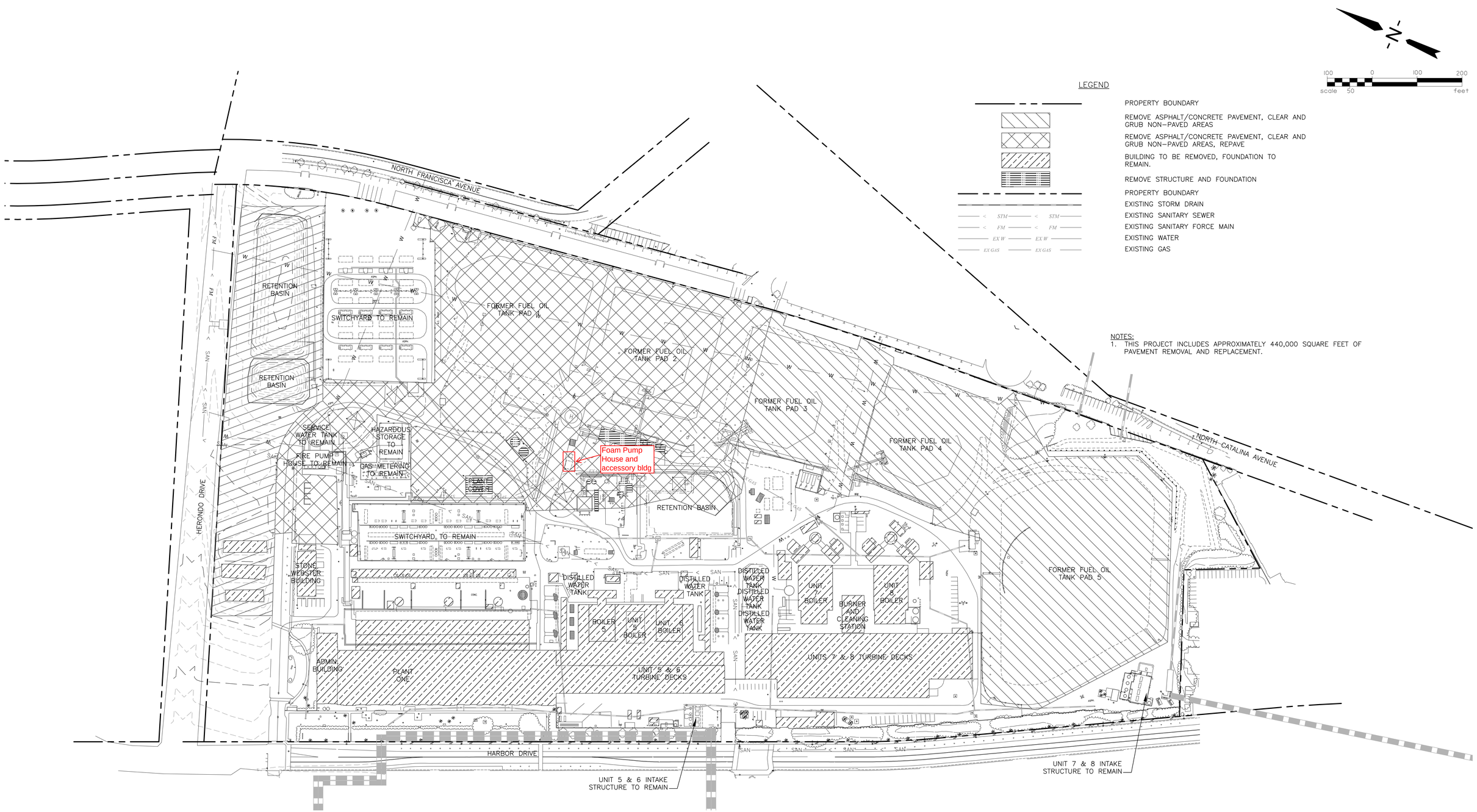
***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION



NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

Page 1 of 1 *Resource Name or #: **Redondo Beach Generating Station – primary fuel pump house**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The primary fuel pump house (or fuel oil pump station) is located just west of the site of the former fuel oil tank #2. It appears in an aerial photo from around 1956, and likely dates to 1948, to the construction of Plant 1. It housed the pumps that transmitted the fuel oil from the oil storage tanks to the plants; it is no longer used. The building is one story and has a rectangular footprint. It has a front gable roof of corrugated metal with exposed rafter tails. The exterior walls are clad in corrugated siding. The entry is on the north elevation, which has a single metal door with a single-light window. Next to the door is a pair of 4-light, metal, awning-style windows. The gable end has a large metal, louvered vent and projecting light fixture with a metal shade. The east and west elevations each have a pair of four-light windows, although one of the windows is missing on the east elevation. The building is surrounded by extensive piping, much of which is attached to the exterior walls and also penetrates the walls of the building.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: #1-View looking southwest with Plant 3 in the background; #2-View looking southeast - September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION

N

100 0 100 200
scale 50 feet

LEGEND

- PROPERTY BOUNDARY
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS, REPAVE
- BUILDING TO BE REMOVED, FOUNDATION TO REMAIN.
- REMOVE STRUCTURE AND FOUNDATION
- PROPERTY BOUNDARY
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER
- EXISTING GAS

NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

NORTH FRANCISCA AVENUE
NORTH CATALINA AVENUE
HERONDO DRIVE
HARBOR DRIVE
RETENTION BASIN
RETENTION BASIN
SWITCHYARD TO REMAIN
SERVICE WATER TANK TO REMAIN
FIRE PUMP HOUSE TO REMAIN
HAZARDOUS STORAGE TO REMAIN
GAS METERING TO REMAIN
TANK COVER
SWITCHYARD TO REMAIN
STONE WEBSTER BUILDING
ADMIN. BUILDING
PLANT ONE
FORMER FUEL OIL TANK PAD 1
FORMER FUEL OIL TANK PAD 2
Primary Fuel Pump House
FORMER FUEL OIL TANK PAD 3
FORMER FUEL OIL TANK PAD 4
FORMER FUEL OIL TANK PAD 5
RETENTION BASIN
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
BOILER 5
UNIT 5 BOILER
UNIT 6 BOILER
UNIT 7 BOILER
UNIT 8 BOILER
BURNER AND CLEANING STATION
UNIT 5 & 6 TURBINE DECKS
UNITS 7 & 8 TURBINE DECKS
UNIT 5 & 6 INTAKE STRUCTURE TO REMAIN
UNIT 7 & 8 INTAKE STRUCTURE TO REMAIN

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #: Redondo Beach Generating Station – gas service structure**

P1. Other Identifier:
***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles
***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 370928.713808, 3746400.78428
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The gas service structure at RBGS is located to the north of the 66kV switchyard, east of Plant 1. Dating from 1948, it appears on a historical aerial photo ca 1956. It is part of the gas metering and delivery system. It is a small rectangular building sitting up on a metal platform with gas lines running underneath it. The building has a shed roof and walls of corrugated metal. The entry is on the west elevation and is a doorway with no door remaining. There is a pair of 4-light metal windows that appear to be fixed. There are no other openings in the building. A warning sign ("Danger Natural Gas No Smoking") and six round dials with glass faces are affixed to the front elevation. Metal pipe railing surrounds the platform, which is accessed by metal stairs.

***P3b. Resource Attributes:** HP9 – public utility
***P4. Resources Present:** ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southeast, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic
o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

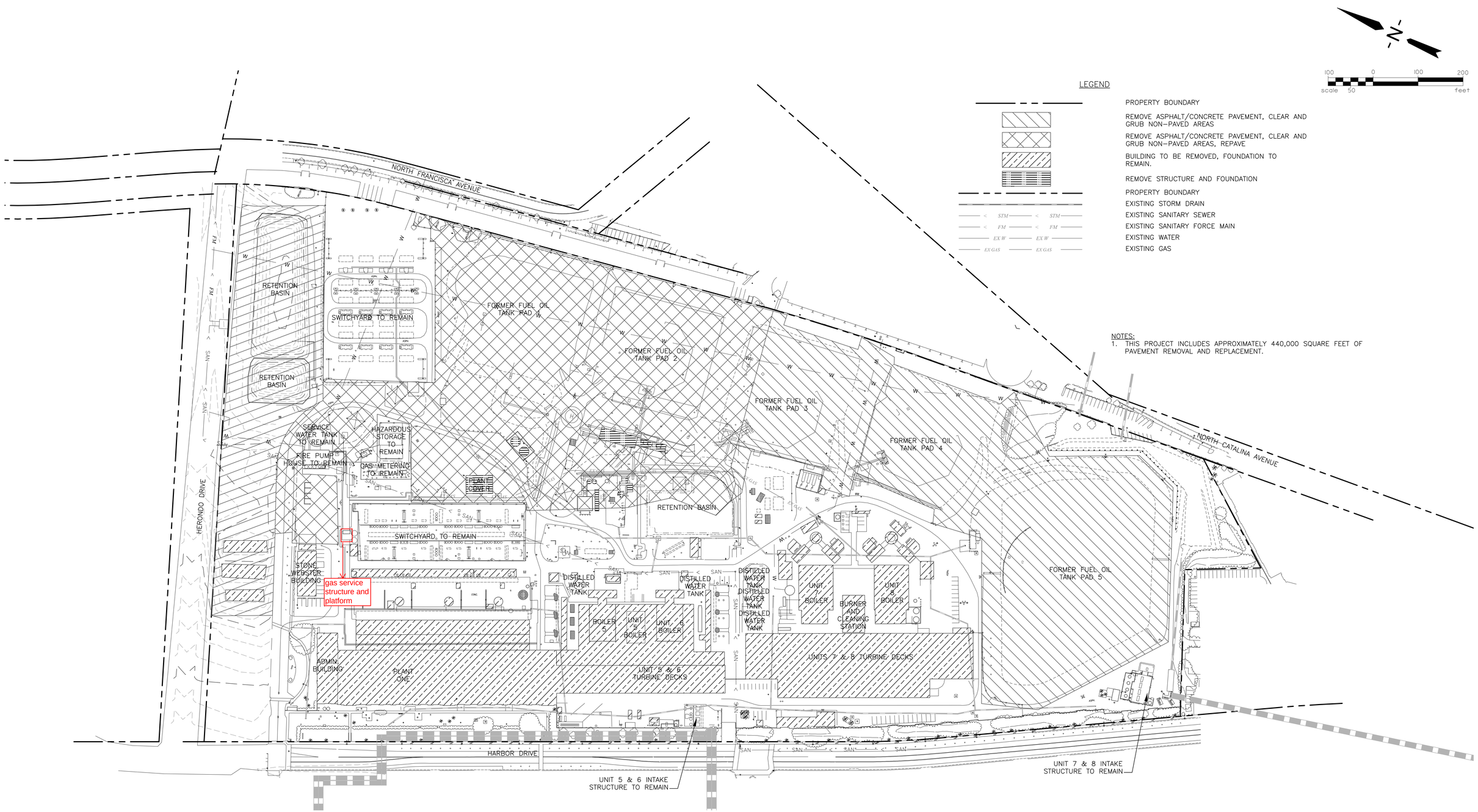
***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #: Redondo Beach Generating Station – paint shop**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The paint shop building at RBGS is located just east of the boilers for Plant 1. Dating from 1948, it was originally used for plant maintenance. It is no longer in use. It is a small, rectangular building with a front gable roof of corrugated metal. The exterior is also clad in corrugated metal, and on the north and south elevations, it is applied in panels. The entry is located on the east elevation and is a single metal door. There is a projecting louvered vent in the gable end. There are no other openings in the building.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southwest, Plant 1 in the rear – September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

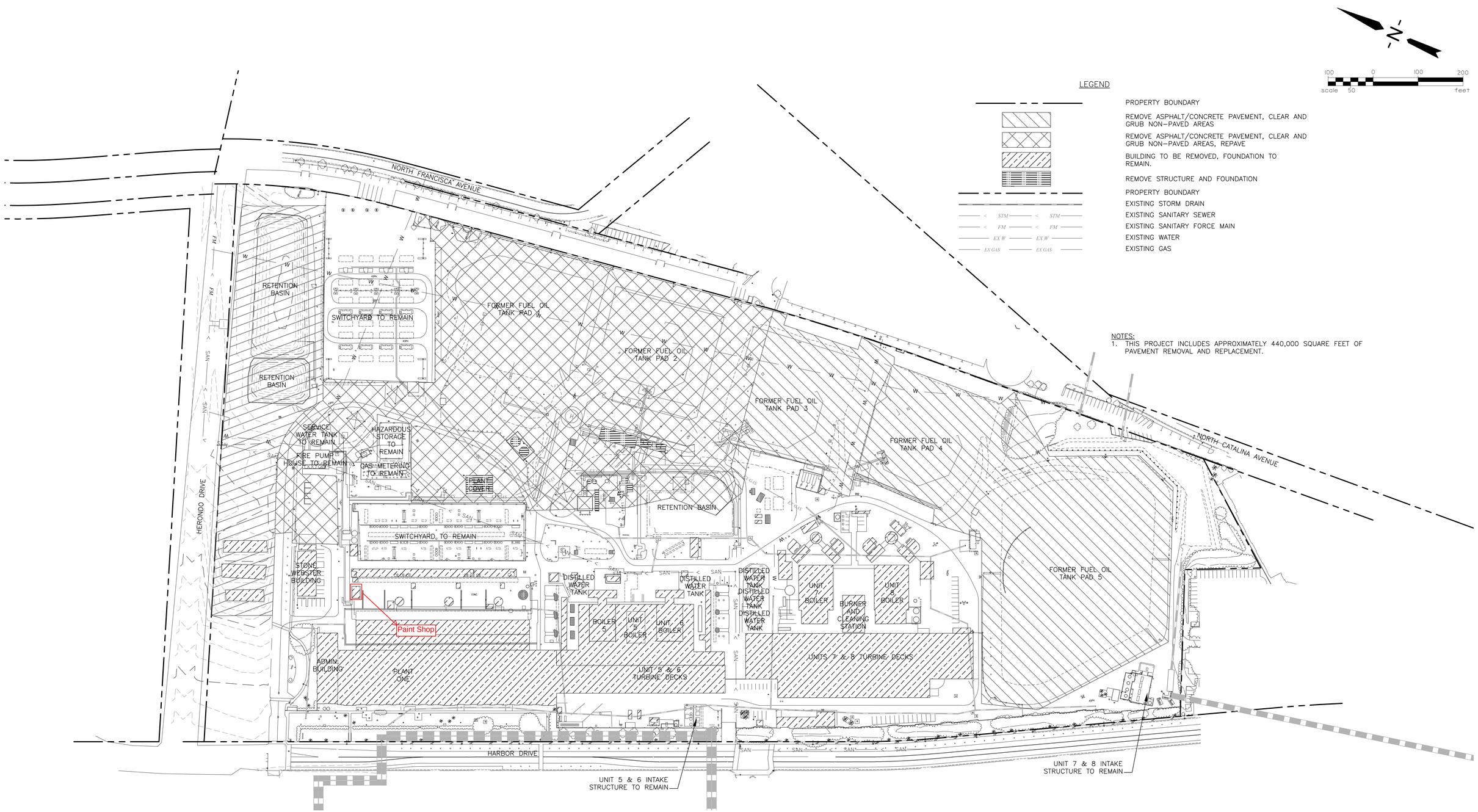
***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

Page 1 **of** 1 *Resource Name or #: **Redondo Beach Generating Station – parking garages**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
There are three identical parking garages at RBGS, located near the northern edge of the property. They appear in an aerial photo from around 1956, and probably date to the construction of Plant 1 in 1948. They have rectangular footprints, poured concrete foundations, and paved floors, and are surrounded by pavement. They have exposed metal framing and shed roofs of corrugated metal. The exterior walls are also corrugated metal. Each building is open on the east side. They are unadorned, utilitarian structures, used for vehicular parking and storage.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo:
View looking northwest – September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic
o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE
x Location Map o Sketch Map
¨ Continuation Sheet ¨ Building, Structure, and Object Record
o Archaeological Record
ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION

N

100 0 100 200
scale 50 feet

LEGEND

- PROPERTY BOUNDARY
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS, REPAVE
- BUILDING TO BE REMOVED, FOUNDATION TO REMAIN.
- REMOVE STRUCTURE AND FOUNDATION
- PROPERTY BOUNDARY
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER
- EXISTING GAS

NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

NORTH FRANCISCA AVENUE
NORTH CATALINA AVENUE
HERONDO DRIVE
HARBOR DRIVE
RETENTION BASIN
RETENTION BASIN
RETENTION BASIN
SWITCHYARD TO REMAIN
SWITCHYARD TO REMAIN
SERVICE WATER TANK TO REMAIN
FIRE PUMP HOUSE TO REMAIN
HAZARDOUS STORAGE TO REMAIN
GAS METERING TO REMAIN
TANK COVER
STONE WEBSTER BUILDING
ADMIN. BUILDING
PLANT ONE
parking garages
FORMER FUEL OIL TANK PAD 1
FORMER FUEL OIL TANK PAD 2
FORMER FUEL OIL TANK PAD 3
FORMER FUEL OIL TANK PAD 4
FORMER FUEL OIL TANK PAD 5
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
BOILER 5
UNIT 5 BOILER
UNIT 6 BOILER
UNIT 7 BOILER
UNIT 8 BOILER
BURNER AND CLEANING STATION
UNIT 5 & 6 TURBINE DECKS
UNITS 7 & 8 TURBINE DECKS
UNIT 5 & 6 INTAKE STRUCTURE TO REMAIN
UNIT 7 & 8 INTAKE STRUCTURE TO REMAIN

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** Redondo Beach Generating Station – Plant 1 (Units 1- 4)

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 15W**; **Sec 01**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Plant 1 contains Units 1 through 4, located at the northwest corner of the Redondo Beach Generating Station (RBGS). This is the oldest plant on the site, and is the only one with indoor units. The first unit came online February 26, 1948. The second and third units became operational in April and August of that year, and the fourth unit in October 1949.

The units consist of a boiler, turbine, generator, control systems, and associated auxiliary equipment necessary to generate electric power. Auxiliary equipment includes condensate and feedwater piping, pumps and heaters, generator cooling systems, fuel delivery systems, boiler lancing systems, instrumentation, electrical and controls, and circulating water system and pumps. These units use natural gas as their fuel source.

The main turbine for each unit is a Westinghouse, as are the generators. Although these four units remain intact, they were retired in 1986. (Continued on page 2)

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ☒ Building ☐Structure ☐Object ☐Site ☐District ☒Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southeast along N. Harbor Drive at west elevation of Plant 1, September 28, 2011

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐Prehistoric ☐Both
1948
Source: AES Redondo Beach, LLC (property owner)

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 12, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☐ Building, Structure, and Object Record ☐Archaeological Record ☒District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐ Photograph Record ☐ Other (List):

Description continued:

The units are contained within a large masonry building clad in scored, unpainted concrete. It has a rectangular footprint, running north/south, and is attached to the Administration Building on the north elevation, and Plant 2 on the south elevation. It sits on a massive concrete foundation. The building has a flat roof behind a parapet. The building reflects the Classical Moderne style, clothing the industrial, utilitarian power plant in a visually appealing structure. The west elevation, which faces N. Harbor Drive and the marina, is the only elevation that is wholly visible. It is separated into fourteen bays by unadorned, full-height pilasters. Each bay contains a large glass block window, vertically-oriented, separated into four sections by metal muntins. Above each of these large windows, near the top of the wall, is a small pair of glass block windows, arranged side by side. At the bottom of each large window is a curved concrete base that projects out, terminating at the top of the foundation. This bay structure breaks up the mass of the large concrete building and gives the elevation a visual rhythm. The center and north and south end pilasters are wider, stepped, and more massive than the other pilasters, further helping to break up the massive elevation. These three pilasters each have a doorway at the ground level, composed of a pair of metal doors surmounted by a large glass block window, set within a concrete frame. On the north elevation, a small section of the building is visible above the Administration Building. It is separated into two bases by three unadorned pilasters, and has four glass block windows, two in each bay. Only a small portion of the south elevation is visible, and it has a metal roll-up door at the ground level. The east elevation appears to be nearly identical to the west elevation, although with smaller glass block windows, but most of it is obscured by a row of boilers and other equipment.

There is a basement level, reached by an interior stair, which contains additional equipment, including a concrete oil storage tank, a booster pump, boiler feed pumps, pump control boards, and evaporator tanks. There is also a narrow tunnel of poured concrete that extends east from Plant 1 into the facility yard. Plant 1 also has one remaining exhaust stack and a switchyard located on the east side.

Alterations at Plant 1

The facility was originally designed and built with dual fuel steam boilers (fuel oil and natural gas). By the late 1980s, the plant was converted to natural gas only. In 1986, Plant 1 was decommissioned and remains inactive. In 1999 three of the four exhaust stacks were removed.

Unit 1 interior - view looking southwest at generator and turbine

Units 1 and 2 – interior view looking south

Plant 1 – interior view NE, showing gantry crane and track

Plant 1 – interior view south showing generator in foreground

Plant 1, Unit 1 – Manufacturer's plaque on generator

Plant 1, Unit 1 – Manufacturer's plaque on steam turbine

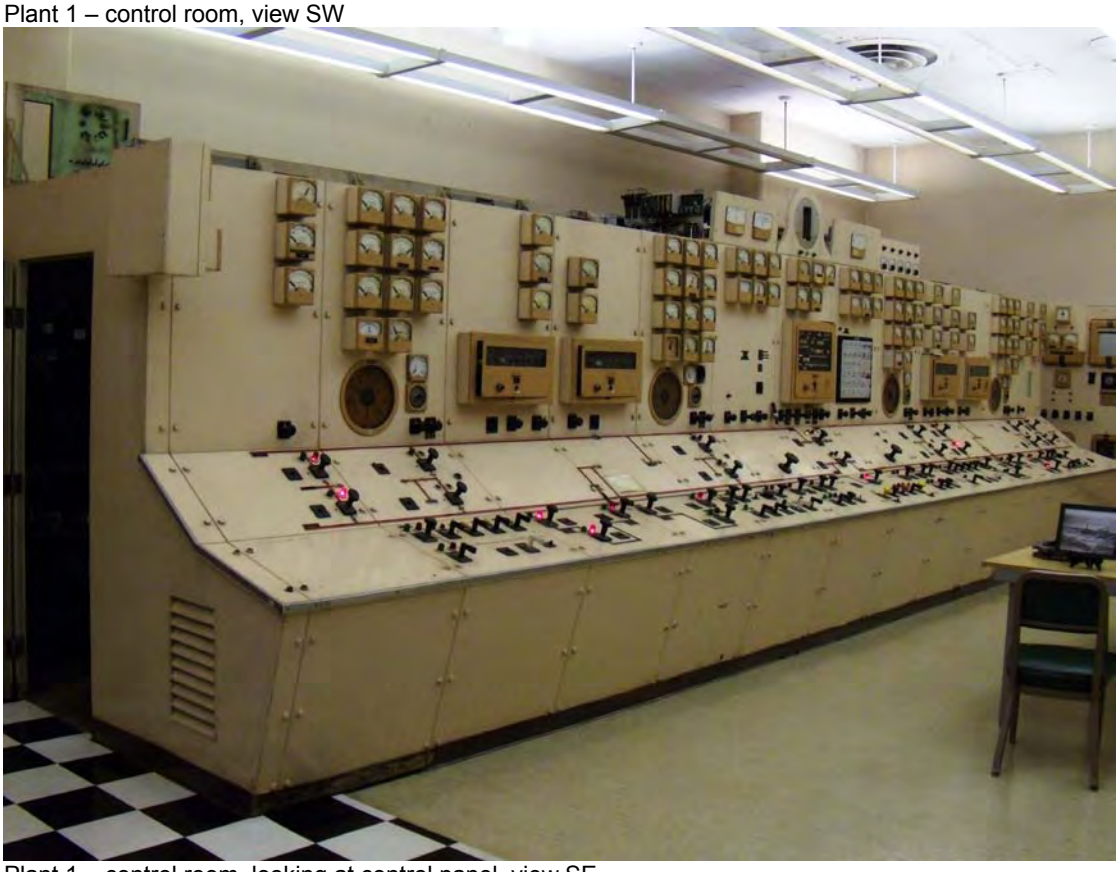
Plant 1, Unit 1 – interior view north, looking at turbine

Plant 1 – interior view southwest, looking at turbines

Plant 1 – interior view west, looking at turbine control board

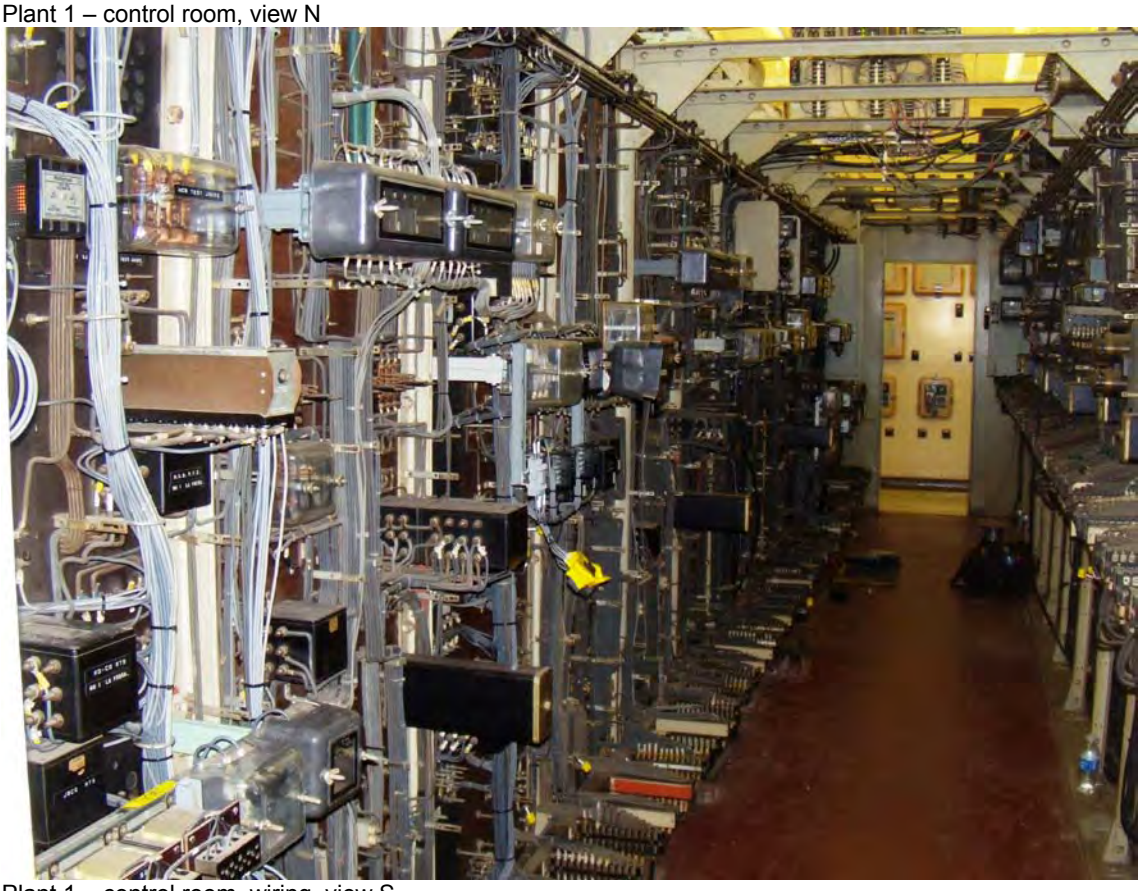
Plant 1 – interior view southeast, looking at feedwater heaters

Plant 1 – control room, view SW



Plant 1 – control room, looking at control panel, view SE

Plant 1 – control room, view N

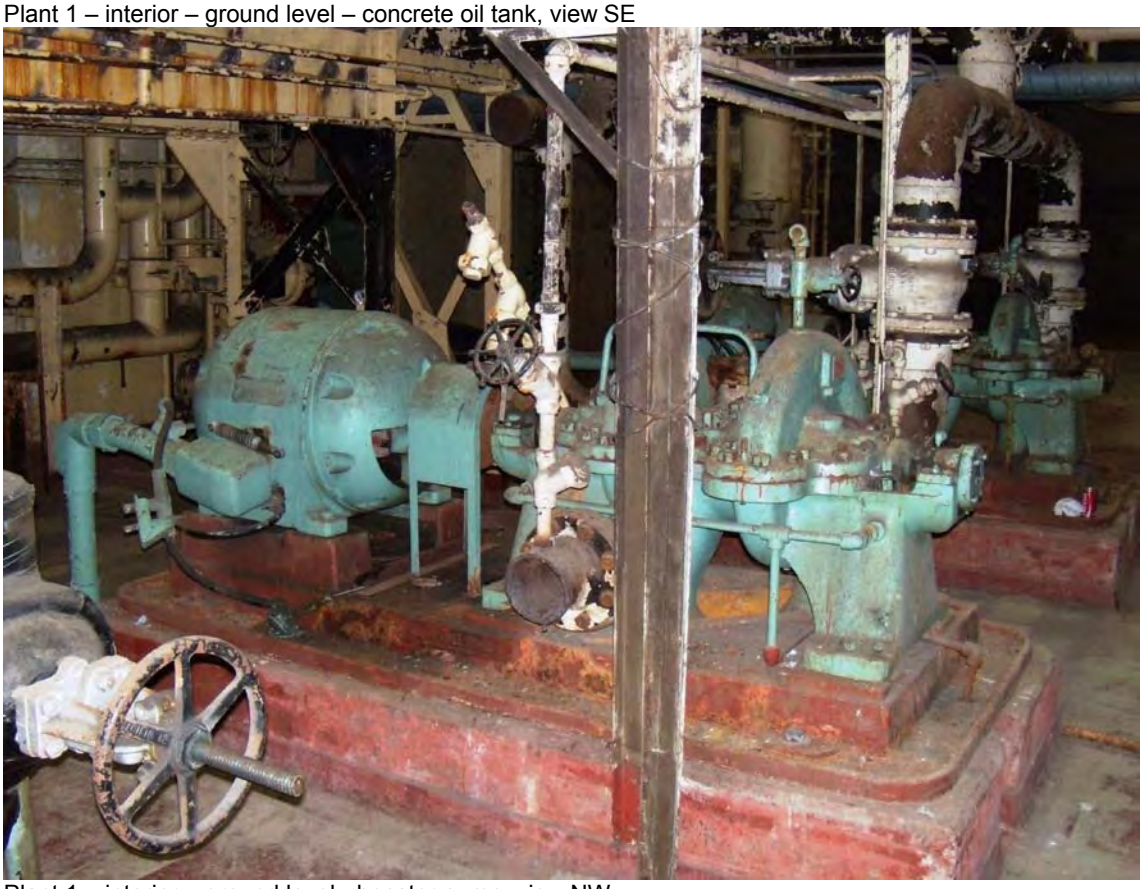


Plant 1 – control room, wiring, view S

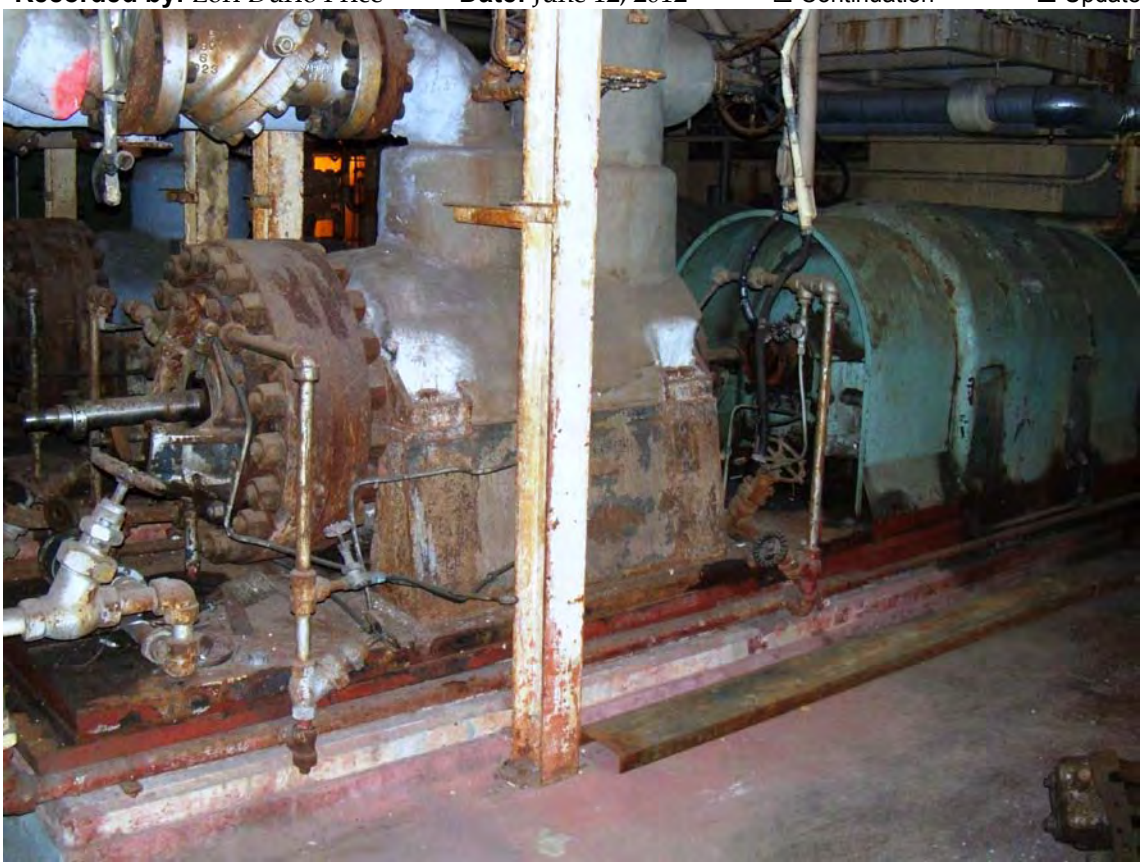
Plant 1 – interior – firing aisle, view S

Plant 1 – interior – firing aisle, view N

Plant 1 – interior – ground level – concrete oil tank, view SE



Plant 1 – interior – ground level - booster pump, view NW



Plant 1 – interior – ground level – boiler feed pump, view SW

Plant 1 – interior – ground level – control board for pumps, view SW

Plant 1 – interior – ground level – saltwater control board, view W

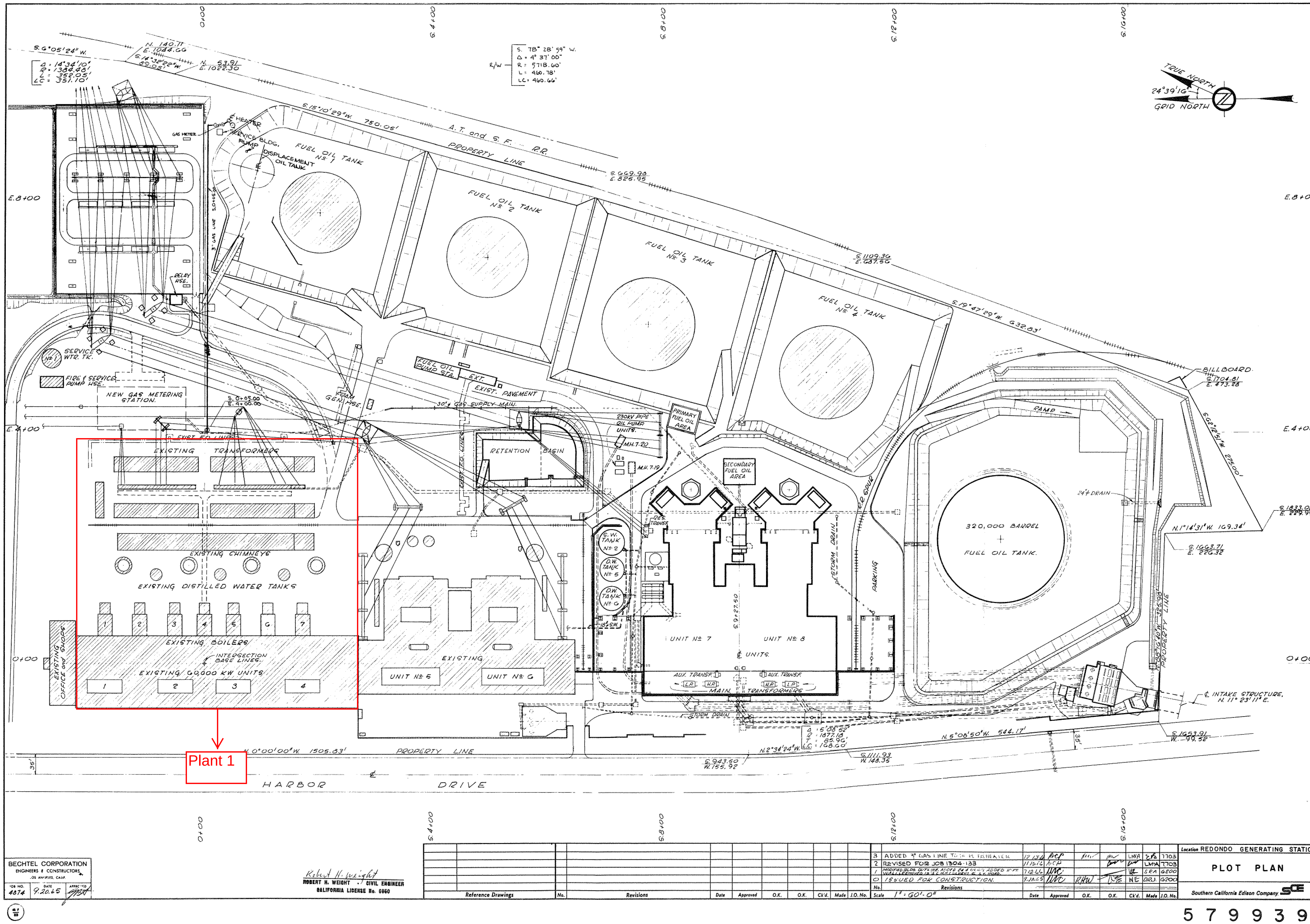
Plant 1 – interior – ground level – evaporator tanks, view NE

Plant 1 – switchyard, view NW. Plant 1 boilers visible at rear.

Plant 1 – rear elevation with base of exhaust stack, view W. Plant 2 rear elevation visible at left.

Plant 1 – rear elevation with only remaining exhaust stack, view W.

Plant 1 – rear elevation, view SW. East elevation of Administration building at right.


S.6°05'24" W.
Δ = 14°34'10"
R = 1384.48'
L = 352.05'
LC = 351.10'
N. 140.11
E. 1044.66
S.14°32'22"W. 89.05'
N. 53.91
E. 1022.30
S. 78° 28' 59" W.
Δ = 4° 37' 00"
R/W
R = 5718.60'
L = 460.78'
LC = 460.66'
TRUE NORTH
24°39'16"
GRID NORTH
S.15°10'29"W. 750.05'
A.T. and S.F. R.R.
PROPERTY LINE
S. 669.98
E. 825.95
S. 1109.36
E. 687.56
S.19°47'29"W. 632.83'
BILLBOARD
S.1704.81
E. 473.28
S.62°12'51"W. 275.00'
S.1833.01
E. 229.99
N.1°14'31"W. 169.34'
S.1663.71
E. 226.32
N.88°16'40"W. 325.98'
PROPERTY LINE
℄ INTAKE STRUCTURE, N. 11° 23' 11" E.
S.1653.91
W. 99.52
N.5°08'50"W. 544.17'
35'
S.1111.93
W. 148.35
Δ = 5°08'52"
R = 1877.18
T = 85.96'
L.C. = 168.60'
N.2°34'24"W.
S.943.50
W.155.92
N.0°00'00"W. 1505.83'
PROPERTY LINE
HARBOR DRIVE
E.8+00
E.4+00
0+00
S.4+00
S.8+00
S.12+00
S.16+00
GAS METER
HEATER
SERVICE BLDG.
PUMP
DISPLACEMENT OIL TANK
FUEL OIL TANK Nº 1
FUEL OIL TANK Nº 2
FUEL OIL TANK Nº 3
FUEL OIL TANK Nº 4
3" GAS LINE
S.0+05.00
RELAY HSE.
SERVICE WTR. TK.
Nº 1
FIRE & SERVICE PUMP HSE.
NEW GAS METERING STATION.
S. 0+05.00
E. 4+00.00
FOAM GEN. HSE.
FUEL OIL PUMP STA.
EXT.
EXIST. PAVEMENT
30"φ GAS SUPPLY MAIN.
230KV PIPE OIL PUMP UNITS.
PRIMARY FUEL OIL AREA
M.H. 7-20
M.H. 7-19
RETENTION BASIN
EXIST. F.O. LINES
SECONDARY FUEL OIL AREA
R.R. SPUR
RAMP
24"φ DRAIN
320,000 BARREL FUEL OIL TANK.
STORM DRAIN
PARKING
RES. TRANSF.
S.W. TANK Nº 2
D.W. TANK Nº 5
D.W. TANK Nº 6
18"φ S.W.
S.9+27.50
UNIT Nº 7
UNIT Nº 8
℄ UNITS.
AUX. TRANSF.
L.P.
H.P.
MAIN TRANSFORMERS
STORM DRAIN
EXISTING
UNIT Nº 5
UNIT Nº 6
EXISTING TRANSFORMERS
EXISTING CHIMNEYS
EXISTING DISTILLED WATER TANKS
1 2 3 4 5 6 7
EXISTING BOILERS
INTERSECTION BASE LINES.
EXISTING 60,000 KW UNITS
1 2 3 4
EXISTING OFFICE and SHOPS
Plant 1
BECHTEL CORPORATION
ENGINEERS & CONSTRUCTORS
LOS ANGELES, CALIF.
JOB NO. 4874
DATE 9.20.65
APPROVED
ROBERT H. WEIGHT · CIVIL ENGINEER
CALIFORNIA LICENSE No. 6060
Reference Drawings
No. Revisions Date Approved O.K. O.K. Ck'd. Made J.O. No.
3 ADDED 3" GAS LINE TO ... HEATER 12.13.. LMA 7703
2 REVISED FOR JOB 1304-133 11.15.66 LMA 7703
1 MODIFIED BLDG. OUTLINE, ADDED 24"φ DRAIN, ADDED 10 FT. WALL ... 7.12.66 WE SRA 6200
0 ISSUED FOR CONSTRUCTION. 9.20.65 RHW WE DRJ. 6200
Scale 1" = 60'-0"
Location REDONDO GENERATING STATION
PLOT PLAN
Southern California Edison Company SCE
579939-3

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

*Resource Name or #: **Redondo Beach Generating Station – Plant 2 (Units 5 & 6)**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 15W**; **Sec 01**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Plant 2 at the Redondo Beach Generating Station (RBGS) contains Units 5 and 6, located approximately midway along the west side of the RBGS property. Units 5 and 6 were added to the facility in 1956.

The units consist of a boiler, turbine, generator, control systems, and associated auxiliary equipment necessary to generate electric power. Auxiliary equipment includes condensate and feedwater piping, pumps and heaters, generator cooling systems, fuel delivery systems, boiler lancing systems, instrumentation, electrical and controls, and circulating water system and pumps. These units use natural gas as their fuel source.

The units are contained within a steel-framed structure that is open on the east elevation. It has a poured concrete foundation and a flat metal roof, with a parapet on the west elevation. The front (west) elevation that faces N. Harbor Drive and the marina is clad in concrete panels, as is part of the south elevation. The west elevation is the only elevation that is wholly visible. Plant 2 has a basically rectangular footprint, running north/south, and is attached to Plant 1 on the north elevation, and Plant 3 on the south elevation. The west elevation has a row of 12 louvered vents in the upper third of the wall. There are three pedestrian doors and row of projecting light fixtures. There is no other ornamentation. Unlike the Classical Moderne style of Plant 1, Plant 2 lacks ornamentation and is strictly utilitarian in appearance. Only a small portion of the south elevation is visible, and it has a large, metal roll-up door at the ground level.

Alterations at Plant 2

The facility was originally designed and built with dual fuel steam boilers (fuel oil and natural gas). By the late 1980s, the plant was converted to natural gas only.

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object o Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking northeast from N. Harbor Drive at west elevation of Plant 2, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1956
Source: AES Redondo Beach, LLC (property owner)

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

Plant 2 – Units 5 and 6 – turbines, view looking southwest

Plant 2 - view looking southwest

Plant 2 – view NW

Plant 2 – aerator tanks, view NW

Plant 2 – feedwater heaters, view NW

Plant 2 – water heaters, with turbine for Unit 6 on the right, view SW

Plant 2, Unit 6 – view SW, looking at turbine

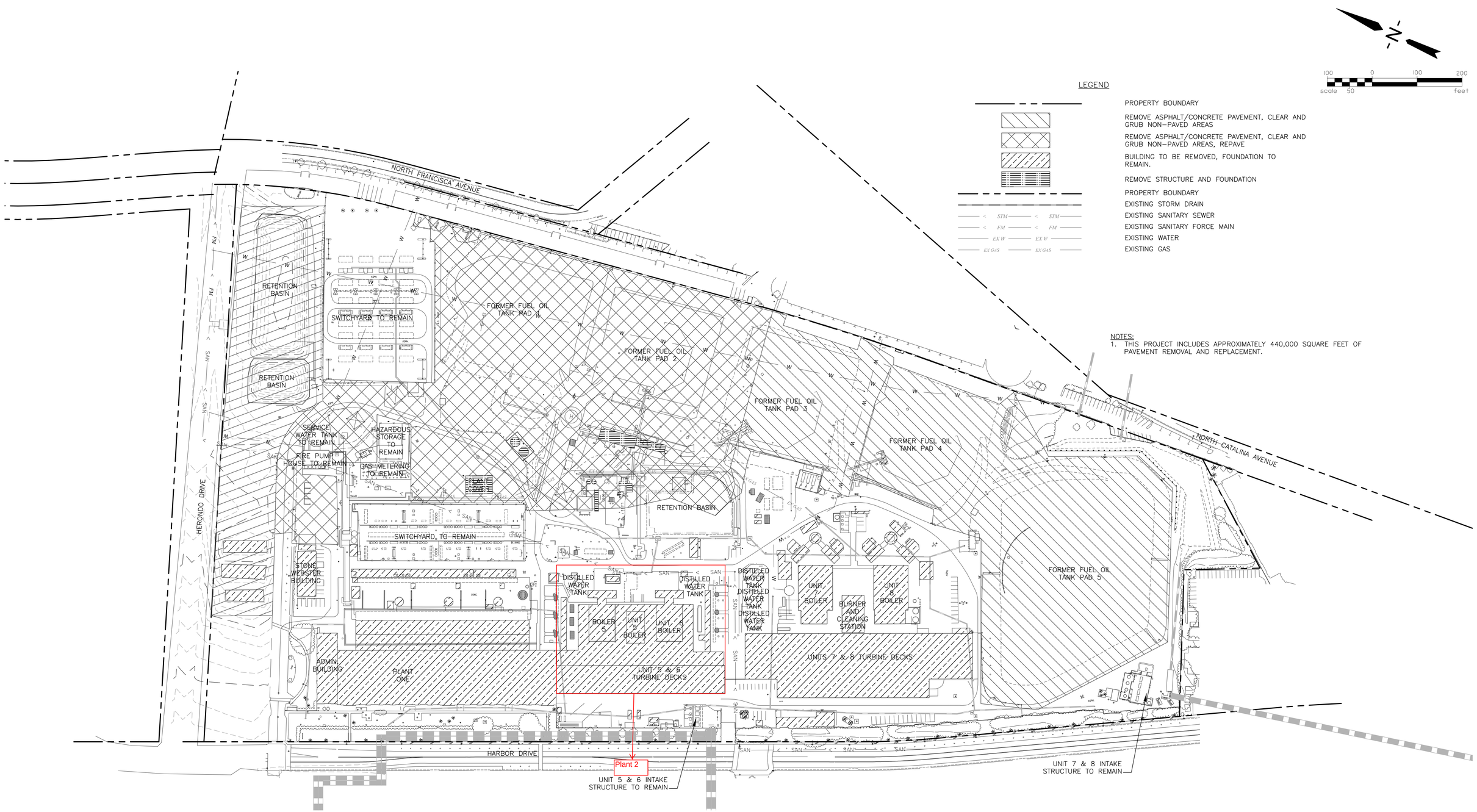
Plant 2 – looking at turbines, view north. South elevation of Plant 1 visible at rear.

Plant 2 – view SW

Plant 2 – view NW, showing exhaust stacks for Units 5 and 6

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code 6Z

Other Listings
Review Code **Reviewer** **Date**

 *__Resource Name or #: Redondo Beach Generating Station – Plant 3 (Units 7 & 8)__

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Plant 3 at the Redondo Beach Generating Station (RBGS) contains Units 7 and 7, located approximately midway along the west side of the RBGS property. Units 7 and 8 were added to the facility in 1968.

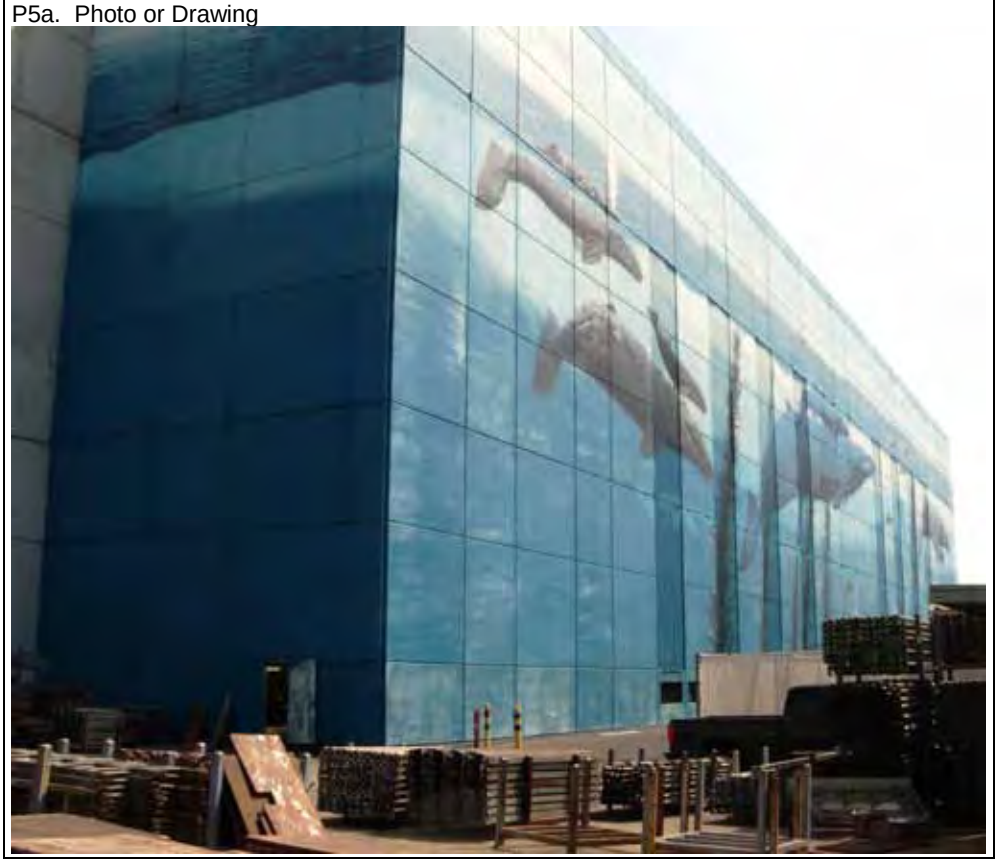
The units consist of a boiler, turbine, generator, control systems, and associated auxiliary equipment necessary to generate electric power. Auxiliary equipment includes condensate and feedwater piping, pumps and heaters, generator cooling systems, fuel delivery systems, boiler lancing systems, instrumentation, electrical and controls, and circulating water system and pumps. These units use natural gas as their fuel source.

The units are contained within a steel-framed structure that is open on the east elevation. It has a poured concrete foundation and a flat metal roof, with a parapet on the west elevation. The front (west) elevation that faces N. Harbor Drive and the marina is clad in concrete panels, as is the south elevation. The west and south elevations are the only elevations that are wholly visible. Plant 3 has a basically T-shaped footprint, running north/south, and is attached to Plant 2 on the north elevation. The west elevation has two sets of four, vertical, inset panels of vertically striated concrete. Along the ground level are two sets of ten rectangular openings. There is one pedestrian door on the north wall where the west elevation projects out. There are no openings on the south elevation. (continued on Page 2)

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ý Building ¨ Structure o Object o Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: View looking southeast from N. Harbor Drive at west elevation of Plant 3, the "Whaling Wall," September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic
o Prehistoric o Both
1968
Source: AES Redondo Beach, LLC (property owner)

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

Description continued:

The west and south elevations are covered in a large mural, painted in 1991 by the artist Robert Wyland. The life-sized mural, known locally as the "Whaling Wall," wraps around the south and west elevations and is highly visible along N. Harbor Drive. The mural, officially titled "Gray Whale Migration," is 586 feet long by 95 feet high, and was dedicated on June 24, 1991. Wyland returned to do some restoration work on the mural in 2011 for its 20-year anniversary. The mural was number 31 in Wyland's campaign to paint 100 life-sized public marine murals with a goal of increasing awareness of marine life and ocean ecology.

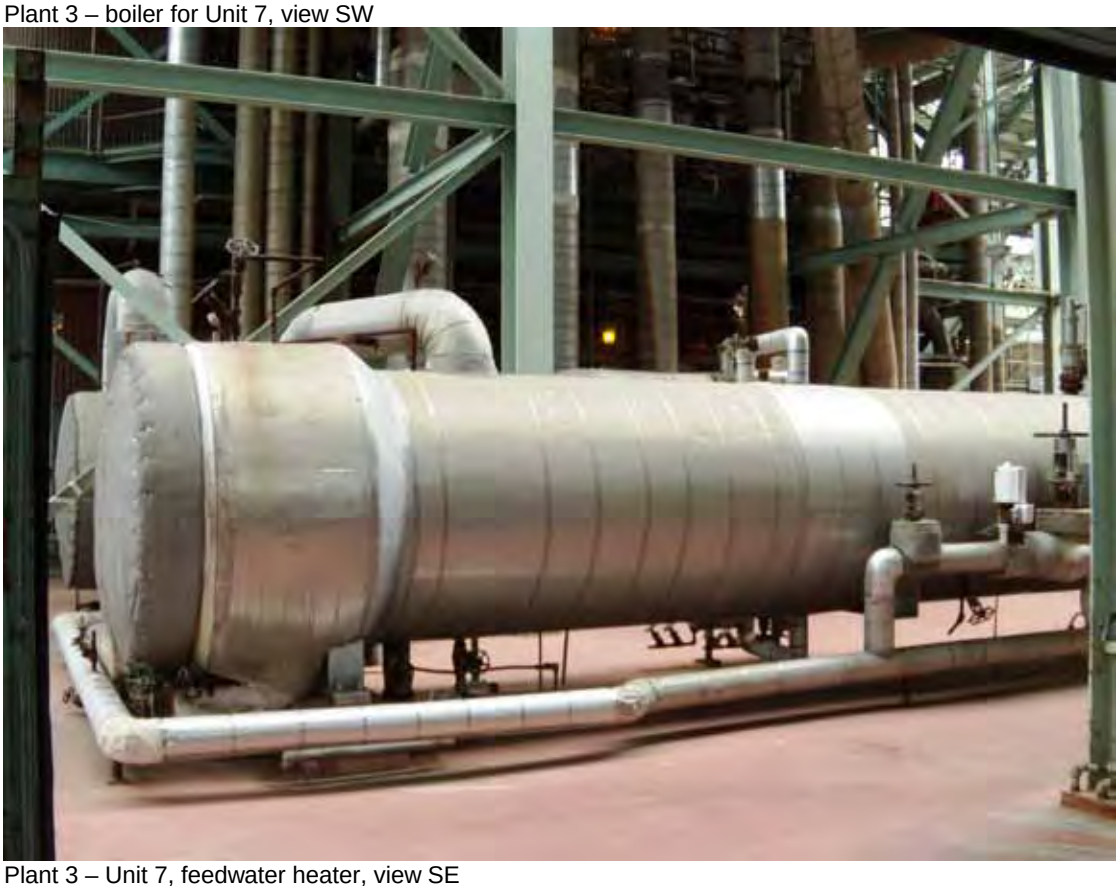
Alterations at Plant 3

The facility was originally designed and built with dual fuel steam boilers (fuel oil and natural gas). By the late 1980s, the plant was converted to natural gas only. Also in the 1980s, a metal wall was added to the east elevation of Plant 3 as a noise abatement measure. In 1991, the "Whaling Wall" mural was painted on the south and west elevations.

Plant 3 – turbines, view looking south

Plant 3 – distilled water tanks, view looking southeast

Plant 3 – boiler for Unit 7, view SW



Plant 3 – Unit 7, feedwater heater, view SE

Plant 3 – view looking up at deaerators, Unit 7

Plant 3 – roll-up doors on east elevation, view SE

Plant 3, Unit 7 turbine – view S

Plant 3 – Unit 7 turbine, view S

Plant 3 – Unit 7 turbine, view SE

Plant 3 – view E, showing wall added in 1980s for noise abatement

Plant 3 – Unit 8 turbine, view SE

Plant 3 – Unit 8 turbine, view NE

Plant 3 – Auxiliary turbine at ground level, view SE

Plant 3 – interior of south wall, view S

Plant 3 – control board

Plant 3 – control board

Plant 3 – Unit 7 boiler, view SW

Plant 3 – Unit 7 and 8 exhaust stacks, view SW

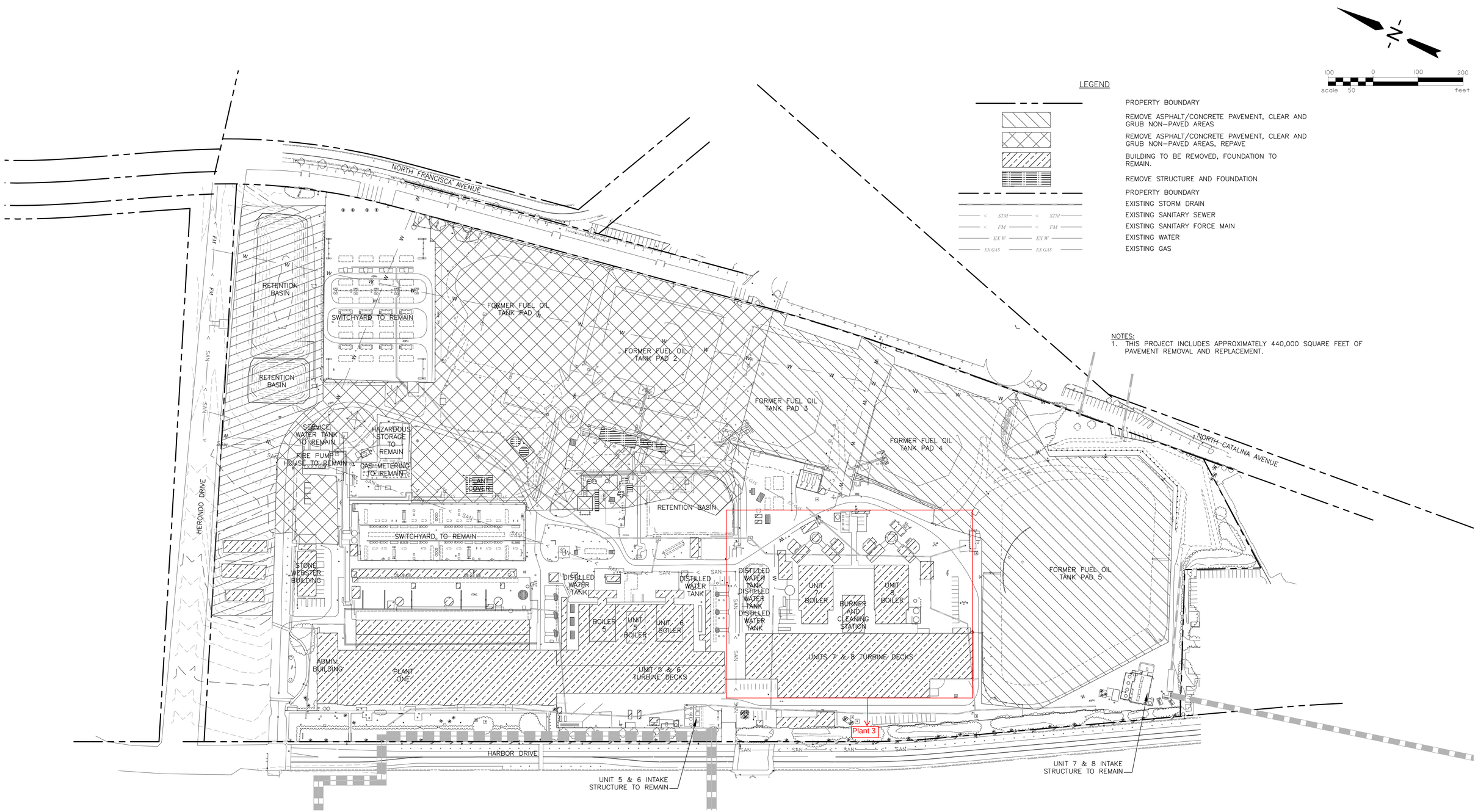
Plant 3 – east elevation, showing added walls, view W

Plant 3 – Unit 7 recirculating pump inlet, view S

Plant 3 – main tranformers, view SE

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

 *Resource Name or #: **Redondo Beach Generating Station – circulating water pumps and traveling screens**

P1. Other Identifier:

***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 07**

c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277

d. UTM: Zone: 11; 370928.713808, 3746400.78428

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The circulating water pumps and associated traveling screens at RBGS are part of the ocean water intake system. They are located along the western edge of the facility, west of Plants 2 and 3. They date from 1956 – 1968, concurrent with the construction of Plants 2 and 3. The pumps and screens for Plant 2 appear on an undated aerial from ca 1956.

The circulating water system supplies sea water to the main condenser to condense the main turbine exhaust steam. The sea water is also used as a coolant in the bearing cooling water heat exchangers and also serves as an emergency fire water supply. The circulating water is taken from the Pacific Ocean, entering through one of the seaward conduits, and then returns through the other conduit. The conduits enter and leave by way of the intake screenwell structure. The sea water is drawn through screening equipment and piping and then pumped to the main condensers and bearing cooling water heat exchangers prior to being returned to the Pacific Ocean. The structure also contains the screen wash pumps. From the intake screenwell structure, the sea water flows through a box culvert to the intake pump well structure. The intake screenwell is a reinforced concrete structure which performs the following functions:

- Directs inlet flow to the trash racks and traveling screens
- Directs return flow to the discharge line
- Provides gates for reversing the flow in the intake and discharge lines
- Provides recirculation control during the heat treatment cycle

(continued on page 2)

***P3b. Resource Attributes:** HP9 – public utility

***P4. Resources Present:** ¨ Building ý Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: Circulating pumps,view looking southwest, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1956 - 1968
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph ca 1956

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive

***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

***Attachments:** o NONE x Location Map o Sketch Map ý Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

***Recorded by:** Lori D. Price ***Date:** June 18, 2012 ý Continuation o Update

Water entering the intake structure passes through trash racks to remove large debris. The trash racks are located downstream of the main stop gate. Each trash rack consists of a series of vertical bars spaced to provide 3-inch openings. The traveling screens are located downstream of the trash racks. Traveling screens are provided for each pair of units. Channels are provided per unit pair with each channel housing an individual screen. The screens are constructed of stainless steel mesh with 5/8 inch openings. Motor operated hoists and support structures are provided to raise and lower the screens during washing operations. The screens are washed with a spray of salt water as they travel through their cycle. Debris is washed into a trough and then to a screen belt. The debris is discharged into a trash basket and is ultimately disposed of. Two circulating water pumps are provided for each unit.

Plant 2 traveling screens, view looking NW.

PRE_119487

NOT FOR CONSTRUCTION

N

100 0 100 200
scale 50 feet

LEGEND

- PROPERTY BOUNDARY
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS, REPAVE
- BUILDING TO BE REMOVED, FOUNDATION TO REMAIN.
- REMOVE STRUCTURE AND FOUNDATION
- PROPERTY BOUNDARY
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER
- EXISTING GAS

NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

NORTH FRANCISCA AVENUE
NORTH CATALINA AVENUE
HERONDO DRIVE
HARBOR DRIVE
RETENTION BASIN
RETENTION BASIN
SWITCHYARD TO REMAIN
SERVICE WATER TANK TO REMAIN
FIRE PUMP HOUSE TO REMAIN
HAZARDOUS STORAGE TO REMAIN
GAS METERING TO REMAIN
FUEL OIL TANK COVER
SWITCHYARD TO REMAIN
STONE WEBSTER BUILDING
ADMIN. BUILDING
PLANT ONE
FORMER FUEL OIL TANK PAD 1
FORMER FUEL OIL TANK PAD 2
FORMER FUEL OIL TANK PAD 3
FORMER FUEL OIL TANK PAD 4
FORMER FUEL OIL TANK PAD 5
RETENTION BASIN
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
BOILER 5
UNIT 5 BOILER
UNIT 6 BOILER
UNIT 7 BOILER
UNIT 8 BOILER
BURNER AND CLEANING STATION
UNIT 5 & 6 TURBINE DECKS
UNITS 7 & 8 TURBINE DECKS
Plant 2 circulating water pumps and traveling screens
UNIT 5 & 6 INTAKE STRUCTURE TO REMAIN
UNIT 7 & 8 INTAKE STRUCTURE TO REMAIN

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

 *Resource Name or #: Redondo Beach Generating Station – service water house

P1. Other Identifier:
*P2. Location: o Not for Publication x Unrestricted *a. County: Los Angeles
*b. USGS 7.5' Quad: Redondo Beach Date: 1963, photo revised 1981 T 4S; R 14W; Sec 06
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 370928.713808, 3746400.78428
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The service water house at RBGS, also known as the fire and service water pump house, is located in the northern section of the facility, west of the 230kV switchyard. It dates from 1948, concurrent with the construction of Plant 1. Much of the building's functions are no longer needed, as RBGS no longer provides its own fire-fighting. Most of its water tanks are marked "out of service." The building has a rectangular footprint and a poured concrete foundation. It has a front gable roof of corrugated metal wtith very shallow overhangs. The exterior walls are also clad in corrugated metal. The entry is located on the south elevation, where there is pair of metal doors in the center of the facade, each with a small, fixed, single-light window. West of these doors is a single door with a three horizontal lights. Above the central doors is a large metal window, twenty lights, with a four-light hopper window in the center. Above this window, in the gable end, is metal louvered vent. The east and west elevations each have four metal windows of ten lights. On these windows the middle sash of four lights are operable awning-style sash. Attached to this elevation are five water tanks, stamped with "out of service." The north elevation has one pedestrian door with three horizontal lights, and a large 32-light window with a four-light hopper sash. All elevations have multiple pipes penetrating the building. The interior contains pump equipment and piping.

*P3b. Resource Attributes: HP9 – public utility
*P4. Resources Present: ý Building ý Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking northwest, water tank on far right, September 28, 2011

*P6. Date Constructed/Age and Sources: x Historic
o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph ca 1956

*P7. Owner and Address:
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

*P8. Recorded by:
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

*P9. Date Recorded: June 18, 2012

*P10. Survey Type: Intensive

*P11. Report Citation: Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

*Attachments: o NONE x Location Map o Sketch Map ý Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

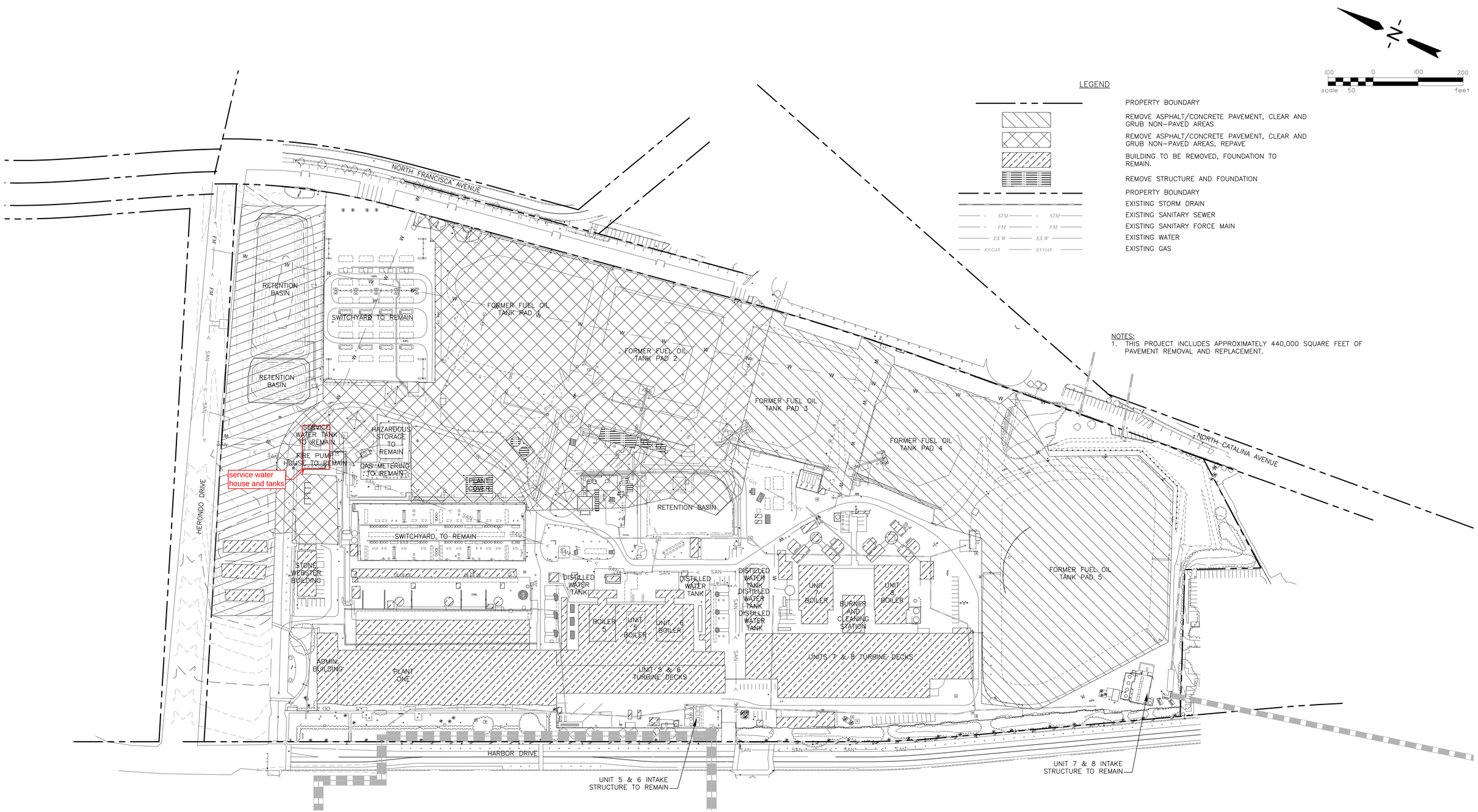
***Recorded by:** Lori D. Price ***Date:** June 18, 2012 ý Continuation o Update

Service Water House, showing out of service water tanks, view looking NE.

Service Water House interior, looking N.

PRE_119487

NOT FOR CONSTRUCTION



NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

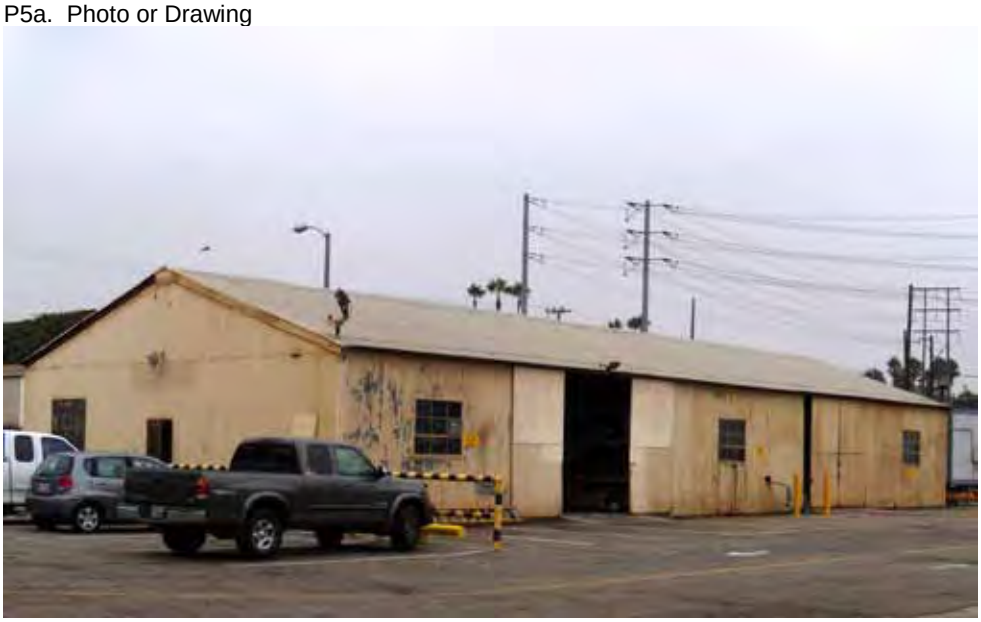
Page 1 of 1 *Resource Name or #: Redondo Beach Generating Station – Stone and Webster building

P1. Other Identifier:
*P2. Location: o Not for Publication x Unrestricted *a. County: Los Angeles
*b. USGS 7.5' Quad: Redondo Beach Date: 1963, photo revised 1981 T 4S; R 14W; Sec 06
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 370928.713808, 3746400.78428
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The building known as the Stone and Webster building dates from ca1947. It appears in an aerial photo from around 1956, and was built to serve the staff of Stone and Webster during the construction of Plant 1. It currently serves as maintenance shops. It is located in the northern section of the facility, east of the Administration Building. The warehouse-type building has a rectangular footprint and sits on a poured concrete foundation. It is surrounded by a paved parking area. It has a side gable roof of corrugated metal, and the walls are also clad in corrugated metal. The primary entry appears to be on the south elevation, through a pair of large, metal sliding doors. Another pair of similar doors is located further east on this elevation. There are three nine-light, metal windows, one on each end of the elevation and one in the middle, between the two pairs of doors. The bottom row of three lights appears to be an operable, awning-style sash. The west elevation has one window, identical to those on the south elevation, and one metal, pedestrian door with a single light. There is also a hooded vent on this elevation, and a projecting light fixture above the door. The north elevation has five of the nine-light windows, and the east elevation is obscured by a trailer/temporary building. The Stone and Webster building is in some disrepair – at least one window pane is missing, trim along the gable end is missing, the siding is in need of paint, and in some areas the corrugated siding has been bent.

*P3b. Resource Attributes: HP9 – public utility
*P4. Resources Present: ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: View looking northeast – September 28, 2011

*P6. Date Constructed/Age and Sources: x Historic
o Prehistoric o Both
1948
Source: AES Redondo Beach, LLC (property owner); undated aerial photograph

*P7. Owner and Address:
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

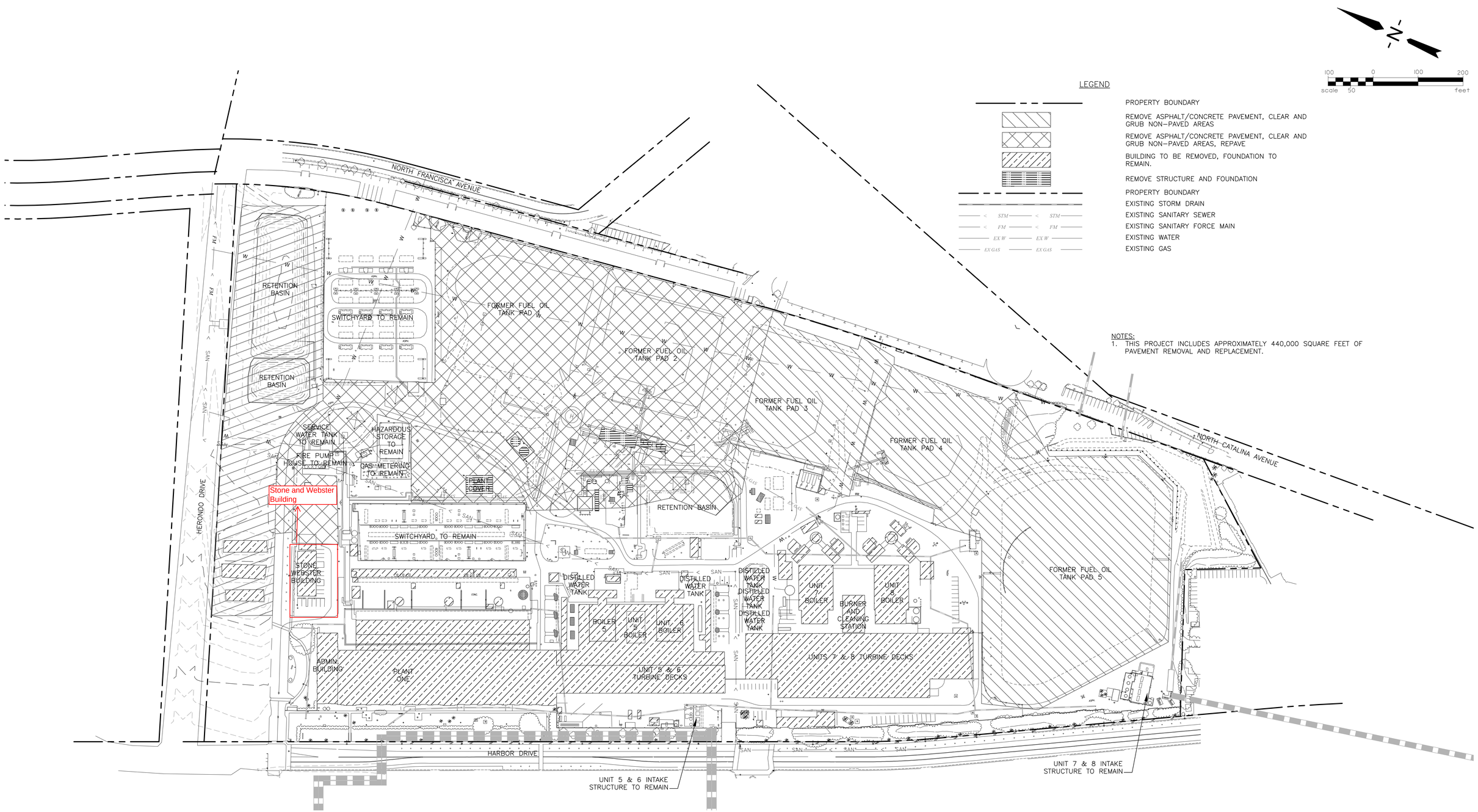
*P8. Recorded by:
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

*P9. Date Recorded: June 18, 2012

*P10. Survey Type: Intensive
*P11. Report Citation: Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*
*Attachments: o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record
o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 of 1 *Resource Name or #: Redondo Beach Generating Station – switchyard oil transfer system building

P1. Other Identifier:
*P2. Location: o Not for Publication x Unrestricted *a. County: Los Angeles
*b. USGS 7.5' Quad: Redondo Beach Date: 1963, photo revised 1981 T 4S; R 14W; Sec 06
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 370928.713808, 3746400.78428
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-819

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The switchyard oil transfer system building at RBGS is located immediately to the north of the 66kV switchyard, east of Plant 1. According to AES staff, it dates from the mid-1950s. It was part of the fuel oil system, which is no longer in use. The building has a rectangular footprint and a poured concrete foundation. It has a side gable roof of corrugated metal wtith eaves. The exterior walls are also clad in corrugated metal. The entry is located on the north elevation, where there are two metal doors, each with a fixed four-light window. The doors are separated by a center support beam. The west elevation has a pair of metal 6-light windows, with the upper sashes being operable awning-style windows. There are no other openings in the building. The front and rear elevations have multiple pipes attached to and penetrating the building.

*P3b. Resource Attributes: HP9 – public utility
*P4. Resources Present: ý Building ¨ Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking southeast, September 28, 2011

*P6. Date Constructed/Age and Sources: x Historic
o Prehistoric o Both
ca1956
Source: AES Redondo Beach, LLC (property owner)

*P7. Owner and Address:
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

*P8. Recorded by:
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707

*P9. Date Recorded: June 18, 2012

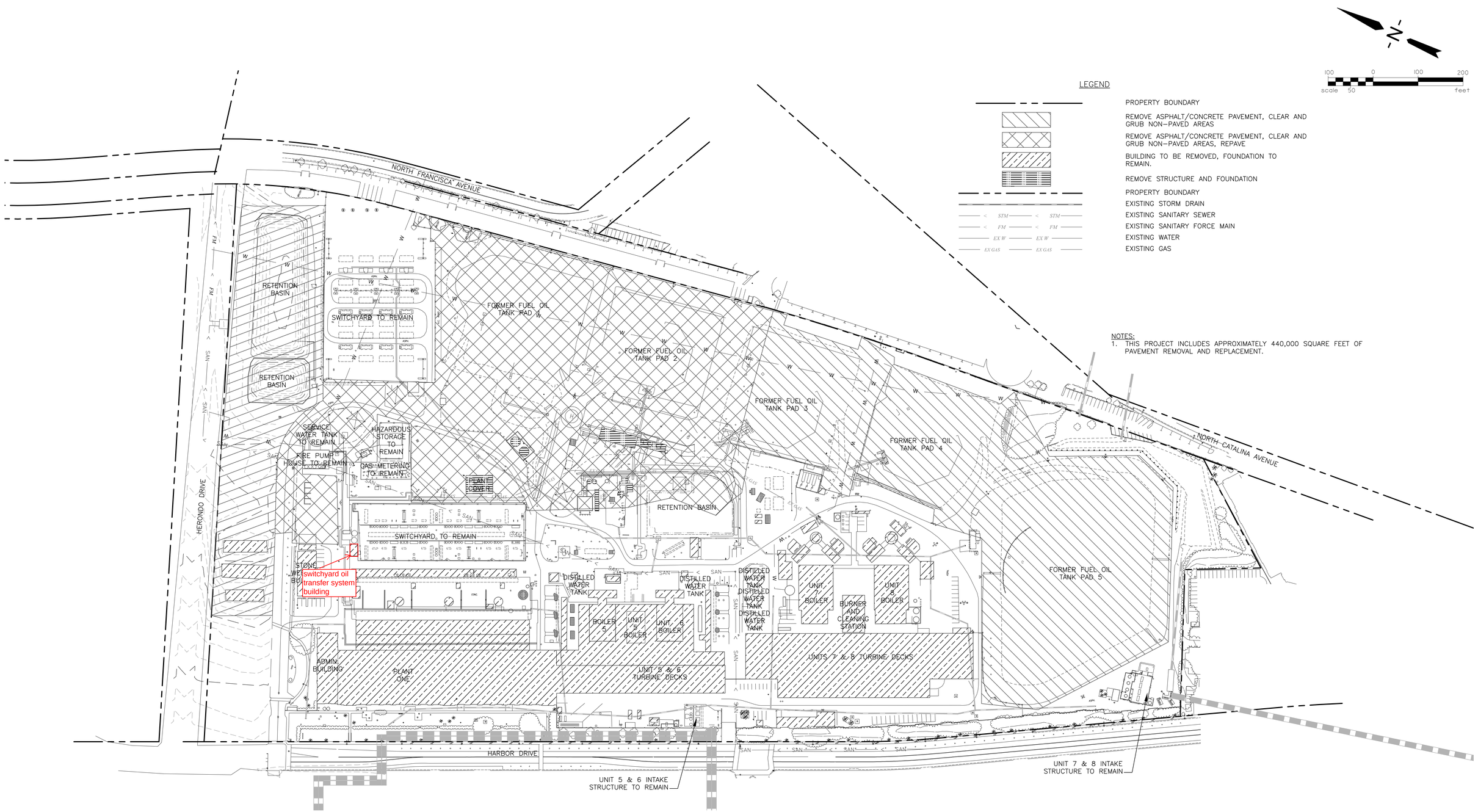
*P10. Survey Type: Intensive

*P11. Report Citation: Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*

*Attachments: o NONE x Location Map o Sketch Map ¨ Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 of 1 *Resource Name or #: Redondo Beach Generating Station – 230kV switchyard and control house

P1. Other Identifier:
*P2. Location: o Not for Publication x Unrestricted *a. County: Los Angeles
*b. USGS 7.5' Quad: Redondo Beach Date: 1963, photo revised 1981 T 4S; R 14W; Sec 06
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 371122.716893, 3746408.213328
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-015

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Redondo Beach Generating Station (RBGS) has two switchyards. The 1948 66kV switchyard is associated with Plant 1. The larger 230 kV switchyard was built to accommodate the later units in 1956 and 1968. It is located in the northeast corner of the facility, and the control house is in the southwest corner of the switchyard. Although the switchyard and control house are within the boundaries of RBGS, they are under an easement to Southern California Edison.

The control house is a small, one-story building with a rectangular footprint and a shed roof. It is constructed of concrete block. The roof has open eaves with a deep overhang. There is a single, metal, pedestrian door on the west elevation. An air-conditioning wall unit has been added to the north elevation. The west and south elevations are surrounded by a chain link fence topped with barbed wire.

*P3b. Resource Attributes: HP9 – public utility
*P4. Resources Present: ý Building ý Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: #1-View looking southeast at control house; #2-View looking northeast across site of former fuel tank - September 28, 2011

*P6. Date Constructed/Age and Sources: x Historic
o Prehistoric o Both
1956-68
Source: AES Redondo Beach, LLC (property owner)

*P7. Owner and Address:
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

*P8. Recorded by:
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707
*P9. Date Recorded: June 18, 2012

*P10. Survey Type: Intensive
*P11. Report Citation: Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*
*Attachments: o NONE
x Location Map o Sketch Map
¨ Continuation Sheet ¨ Building, Structure, and Object Record
o Archaeological Record
ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

PRE_119487

NOT FOR CONSTRUCTION

N

100 0 100 200
scale 50 feet

LEGEND

- PROPERTY BOUNDARY
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS, REPAVE
- BUILDING TO BE REMOVED, FOUNDATION TO REMAIN.
- REMOVE STRUCTURE AND FOUNDATION
- PROPERTY BOUNDARY
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER
- EXISTING GAS

NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

NORTH FRANCISCA AVENUE
NORTH CATALINA AVENUE
HERONDO DRIVE
HARBOR DRIVE
SCE 230kV switchyard and control house
RETENTION BASIN
RETENTION BASIN
SWITCHYARD TO REMAIN
SERVICE WATER TANK TO REMAIN
FIRE PUMP HOUSE TO REMAIN
HAZARDOUS STORAGE TO REMAIN
GAS METERING TO REMAIN
TANK COVER
SWITCHYARD TO REMAIN
STONE WEBSTER BUILDING
ADMIN. BUILDING
PLANT ONE
FORMER FUEL OIL TANK PAD 1
FORMER FUEL OIL TANK PAD 2
FORMER FUEL OIL TANK PAD 3
FORMER FUEL OIL TANK PAD 4
FORMER FUEL OIL TANK PAD 5
RETENTION BASIN
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
BOILER 5
UNIT 5 BOILER
UNIT 6 BOILER
UNIT 7 BOILER
UNIT 8 BOILER
BURNER AND CLEANING STATION
UNIT 5 & 6 TURBINE DECKS
UNITS 7 & 8 TURBINE DECKS
UNIT 5 & 6 INTAKE STRUCTURE TO REMAIN
UNIT 7 & 8 INTAKE STRUCTURE TO REMAIN

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

 *Resource Name or #: **Redondo Beach Generating Station – former fuel tank sites**

P1. Other Identifier:
***P2. Location:** o **Not for Publication** x **Unrestricted** ***a. County:** Los Angeles
***b. USGS 7.5' Quad:** Redondo Beach **Date:** 1963, photo revised 1981 **T 4S**; **R 14W**; **Sec 06 & 07**
c. Address: 1100 N. Harbor Drive City: Redondo Beach Zip: 90277
d. UTM: Zone: 11; 371122.716893, 3746408.213328
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Parcel number 7503-013-015

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) Redondo Beach Generating Station (RBGS) once contained five fuel tanks. Tanks 1 through 4 were arranged from north to south along the east side of the property, and likely dated from 1948 to 1967, with tanks added as the facility increased the number of units. A fifth tank, larger than the others with a capacity of 320,000 barrels, was located just south of Plant 3 and likely dated from 1968, coinciding with Plant 3 construction. The facility was originally designed and built as dual fuel steam boilers (fuel oil and natural gas). By the late 1980s, the plant was converted to natural gas only. The tanks were no longer needed and were removed in 2006. All that remains are the footprints of the tanks and the concrete berms that surrounded them.

***P3b. Resource Attributes:** HP9 – public utility
***P4. Resources Present:** ¨ Building ý Structure o Object ¨ Site ¨ District ý Element of District o Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: View looking northeast at site of former fuel tank #1, September 28, 2011

***P6. Date Constructed/Age and Sources:** x Historic o Prehistoric o Both
1948-68
Source: AES Redondo Beach, LLC (property owner)

***P7. Owner and Address:**
AES Redondo Beach, LLC
1100 N. Harbor Drive, Redondo Beach, CA 90277

***P8. Recorded by:**
Lori D. Price
CH2M HILL
6 Hutton Center Dr., Suite 700
Santa Ana, CA, 92707
***P9. Date Recorded:** June 18, 2012

***P10. Survey Type:** Intensive
***P11. Report Citation:** Cardenas, et al. 2012. *Cultural Resources Inventory Report for the Redondo Beach Energy Project, Los Angeles County, California*
***Attachments:** o NONE x Location Map o Sketch Map ý Continuation Sheet ¨ Building, Structure, and Object Record o Archaeological Record ý District Record o Linear Feature Record o Milling Station Record o Rock Art Record o Artifact Record o Photograph Record o Other (List):

Former fuel tank sites (tanks #2 and #3), view looking SE.

Former fuel tank site (tank 5), looking SE from Plant 3. Note the former rail spur in the paved area in the middle of the picture.

PRE_119487

NOT FOR CONSTRUCTION

N

100 0 100 200
scale 50 feet

LEGEND

- PROPERTY BOUNDARY
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS
- REMOVE ASPHALT/CONCRETE PAVEMENT, CLEAR AND GRUB NON-PAVED AREAS, REPAVE
- BUILDING TO BE REMOVED, FOUNDATION TO REMAIN.
- REMOVE STRUCTURE AND FOUNDATION
- PROPERTY BOUNDARY
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING WATER
- EXISTING GAS

NOTES:
1. THIS PROJECT INCLUDES APPROXIMATELY 440,000 SQUARE FEET OF PAVEMENT REMOVAL AND REPLACEMENT.

NORTH FRANCISCA AVENUE
NORTH CATALINA AVENUE
HERONDO DRIVE
HARBOR DRIVE
RETENTION BASIN
RETENTION BASIN
SWITCHYARD TO REMAIN
SERVICE WATER TANK TO REMAIN
FIRE PUMP HOUSE TO REMAIN
HAZARDOUS STORAGE TO REMAIN
GAS METERING TO REMAIN
TANK COVER
SWITCHYARD TO REMAIN
RETENTION BASIN
STONE WEBSTER BUILDING
ADMIN. BUILDING
PLANT ONE
FORMER FUEL OIL TANK PAD 1
FORMER FUEL OIL TANK PAD 2
FORMER FUEL OIL TANK PAD 3
FORMER FUEL OIL TANK PAD 4
FORMER FUEL OIL TANK PAD 5
Former fuel tank sites
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
DISTILLED WATER TANK
BOILER 5
UNIT 5 BOILER
UNIT 6 BOILER
UNIT 7 BOILER
UNIT 8 BOILER
BURNER AND CLEANING STATION
UNIT 5 & 6 TURBINE DECKS
UNITS 7 & 8 TURBINE DECKS
UNIT 5 & 6 INTAKE STRUCTURE TO REMAIN
UNIT 7 & 8 INTAKE STRUCTURE TO REMAIN

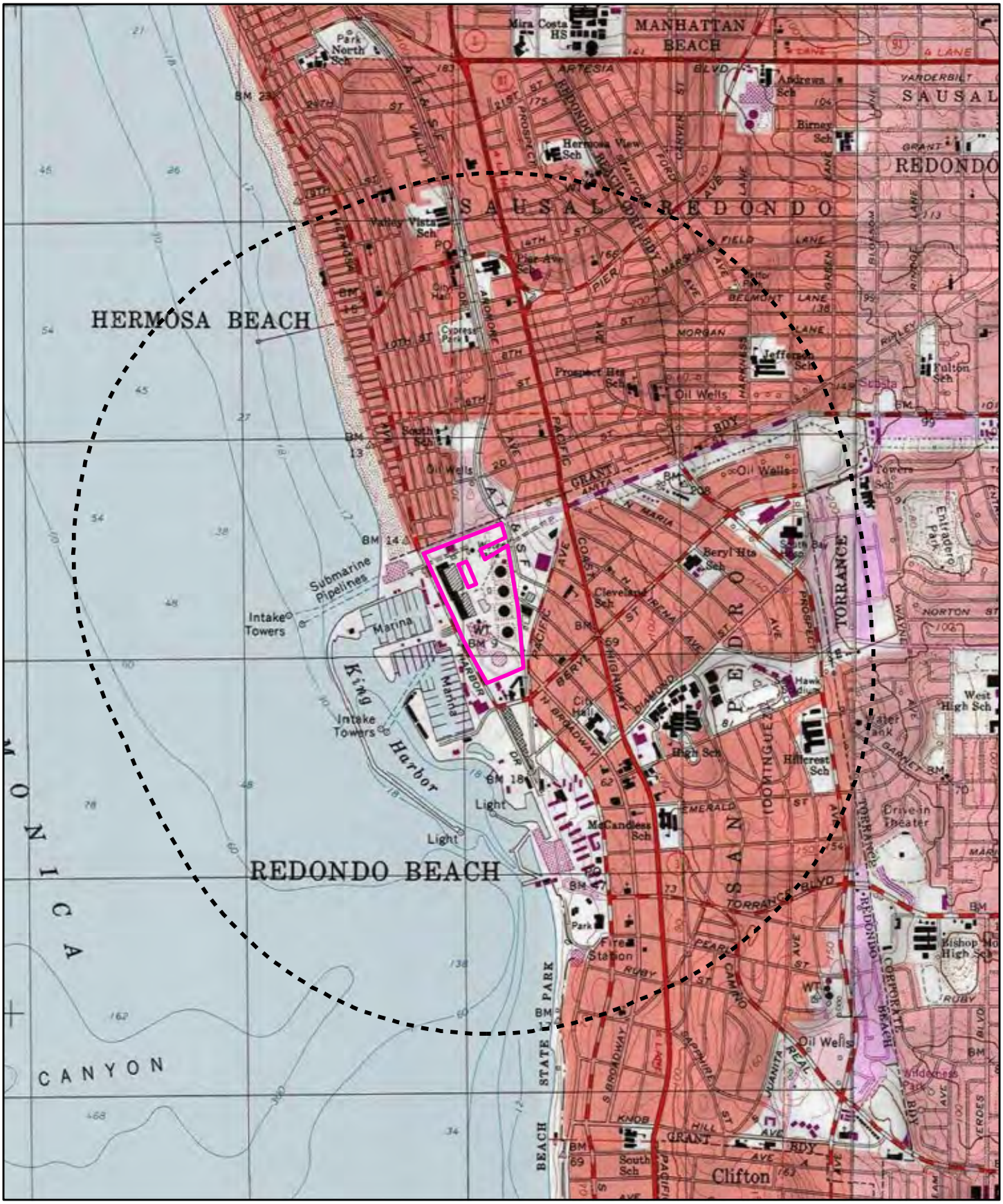
Attachment DA5.3-2
CONFIDENTIAL
Updated Map of Historic Resources

ATTACHMENT DA5.3-2

Updated Map of Historic Resources

Attachment DA 5.3-2 was submitted to the California Energy Commission under a request for confidentiality.

Attachment DA5.3-3
Project Map Sent to the NAHC and Native Americans



0 1,000 2,000 Feet

N

Township 4S,Range 15W, Section 01
Township 4S,Range 14W, Section 06
Township 4S,Range 14W, Section 07
Quad Name: Redondo Beach

Legend

Project Site 1 mile Buffer

Project Location

FIGURE 1
Redondo Beach Generating Station
AES AFC and Permitting
Los Angeles, California

CH2MHILL

5.12 Traffic and Transportation

14. Estimated Percentage of Current Traffic Flows (Appendix B (g)(5)(C)(v)

Estimated percentage of current traffic flows for passenger vehicles and trucks.

Information required to make the AFC conform with regulations:

The estimated percentage of current traffic flows for passenger vehicles and trucks is required for all roadways. Section 5.12.1.3.3 (Page 5.12-14) states "Along PCH, in the project study area, trucks comprise approximately 3 percent of the total vehicular traffic." Please provide the estimated percentage of current traffic flows for passenger vehicles and trucks for all the roadways as discussed in Section 5.12.1.1 (Page 5.12-1) and depicted in Table 5.12-4.

Response: In addition to PCH, there are seven (7) roadways evaluated in Table 5.12-4 found in the AFC. Truck data (volumes and percentages) were not readily available for any of these roadways. Given the project area and adjacent land uses, truck percentages on the other roads would likely be similar to PCH, so 3 percent is a reasonable estimate for these roads as well. The project is only adding 33 trucks/day, or just a few trucks/hour. Given the low truck volumes (both before and during construction), any variations from the 3 percent estimate will not yield a meaningful change in the results. Therefore, Applicant recommends using 3 percent truck traffic as the estimate for all surface streets.

3.0 Transmission System Engineering

15. Typical Transmission Tower Design (Appendix B (i)(2)(A)

A discussion of the need for the additional electric transmission lines, substations, or other equipment, the basis for selecting principal points of junction with the existing electric transmission system, and the capacity and voltage levels of the proposed lines, along with the basis for selection of the capacity and voltage levels.

Information required to make the AFC conform with regulations:

Resubmit figure 3.1-2 230kV Typical transmission tower design with dimension, pole configuration and required number of poles to interconnect the project to the existing switchyard.

Response: Revised Figure 3.1-2BR presents the pole locations, pole types, number, and dimensions (height).

16. Post Project One Line Diagram (Appendix B (b)(2)(C)

A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of rights of way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators. This description shall include power load flow diagrams which demonstrate conformance or nonconformance with utility reliability and planning criteria at the time the facility is expected to be placed in operation and five years thereafter; and

Information required to make the AFC conform with regulations:

Please provide modified post project one line diagram of the SCE 230kV Redondo Beach Switching Station showing all the equipment that would be constructed or modified to interconnect the proposed project including 230kV breakers, disconnect switches with their respective ratings and conductor termination points of the substation.

Response: RBEP will interconnect to the SCE 230-kV switching station using the existing cabling located on the existing transmission tower west of the switching station. No construction within the switching station is expected. Therefore, a revised one line diagram is not necessary.

17. Underground Electric Line Construction (Appendix B (h)(1)(A)

Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, and permits applicable to the proposed project, and a discussion of the applicability of each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed;

Information required to make the AFC conform with regulations:

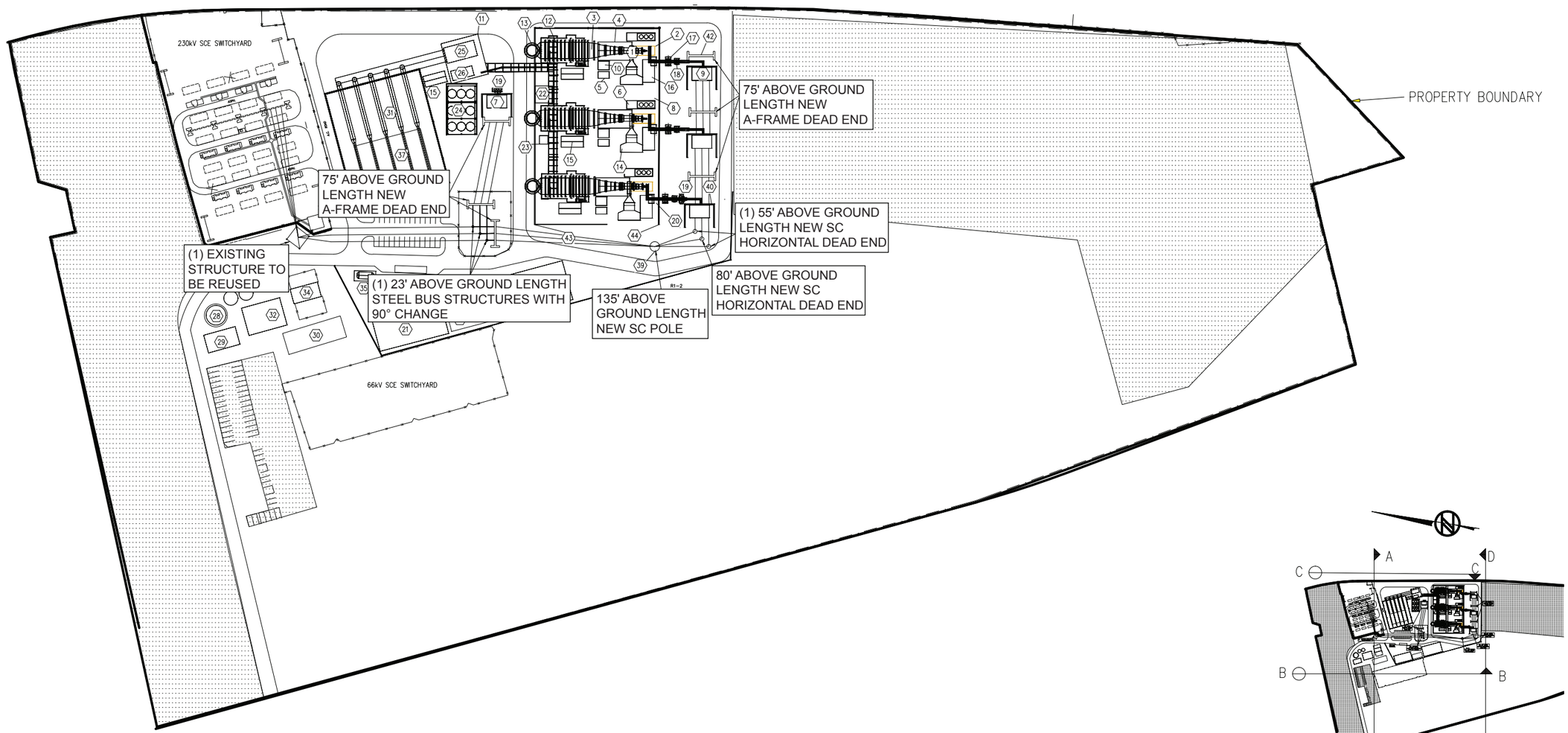
Need to discuss "underground electric line construction" CPUC- G.O.128

Response: The RBEP does not include any underground electrical transmission lines or facilities. Therefore, General Order 128 does not apply.

EQUIPMENT LIST			EQUIPMENT LIST			EQUIPMENT LIST		
NO.	DESCRIPTION	DIMENSIONS	NO.	DESCRIPTION	DIMENSIONS	NO.	DESCRIPTION	DIMENSIONS
1	COMBUSTION GAS TURBINE (CGT)	100'x32'x34'	16	SFC. ENCLOSURE	40'x21'x15'	31	ACC	209'x174'x83'
2	CGT GENERATOR ENCLOUSURE	16'x39'x34'	17	SFC. TRANSFORMER	11'x8'x10'	32	WATER TREATMENT BUILDING	70'x50'x19'
3	CGT/HRSG TRANSITION DUCT	14'x32'x31'	18	SEC. TRANSFORMER	11'x8'x10'	33	NEW CONTROL/ADMIN BUILDING	100'x72'x19'
4	CGT ENCLOSURE	61'x32'x25'	19	UNIT TRANSFORMER	9'x11'x9'	34	EXIST. HAZARDOUS MTRL. STORAGE	50' x 27'x 12'
5	FUEL GAS SKID	20' x 12'x15'	20	GENERATOR MAIN CIRCUIT BREAKER	10' x 12'	35	AMONIA TANK AND CONTAINMENT	18' x 38'x14'
6	CGT CONTROL/LUBE OIL SKID	50' x 14.5'x12'	21	FUEL GAS COMPRESSOR ENCLOSURE	125'x60'x25'	36	DI WATER TANK	28' DIA.x30'S.S
7	STG STEP UP TRANSFORMER	35' x 23'x 15'	22	BOILER FEEDPUMP ENCLOSURE	30' x 30'x15'	37	RETENTION POND	100'X180'
8	TURBINE COOLING AIR SKID	10' x 8' x 24'	23	CEMS	15'x15'x10'	38	AMMONIA UNLOADING	56'X12'
9	CGT STEP UP TRANSFORMER	35' x 22'x15'	24	BOP FIN FAN COOLER	86'x48'x15'	39	TRANSMISSION POLE (TYP.)	80' – 135' TAL
10	CO2 F/F (LP TANK)	19'–6"x15'–6"	25	STEAM TURBINE GENERATOR	52' x 23'	40	TRANSFORMER WALL	53'x42'x30'
11	STG ENCLOSURE	77' x 73' x 40'	26	STG CONTROL/LUBEOIL SKID	38' x 17'	41	NEW SERVICE WATER TANK	28' DIA.x30'S.S
12	HEAT RECOVERY STEAM GENERATOR	96'x45'x70'	27	FUEL GAS CONDITIONING SKID	71.5' x 34'	42	TRANSMISSION A–FRAME	75' TALL
13	STACK	18' DIA.	28	EXIST. SERVICE WTR. TNK 1	40' DIA.x48' S.S.	43	TURBINE HALL ENCLOSURE HRSG	349'x95'x83'–6
14	CGT AIR INTAKE SYSTEM	40' x 38'	29	EXIST.FIRE WATER PUMP ENCLOSURE	58' x 32'x 18'	44	TURBINE HALL ENCLOSURE CGT	349'x126'x60'–6
15	ELECTRICAL/CONTROL PACKAGE	20' x 40'X 15'	30	EXISTING GAS METERING STATION	106' x 38'			

FENCE

CONSTRUCTION PARKING AND LAYDOWN



PLOT LAYOUT
SCALE: 1/64"=1'–0"

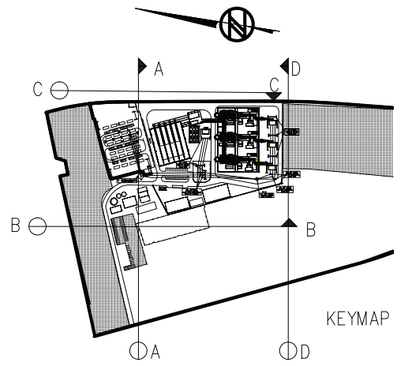


FIGURE 3.1-2bR
Anticipated Tower Locations and Dimensions at RBEP
AES Redondo Beach Energy Project
Redondo Beach, California

Source: Electric Power Engineers, 11/05/2012.

CH2MHILL

5.14 Waste Management

18. Construction and Demolition Debris Waste Reduction and Recycling Requirements (Appendix B (i)(1)(A)

Tables which identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicability of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed; and

Information required to make the AFC conform with regulations:

The AFC does not discuss whether the Project complies with the City's ordinance on "Construction and Demolition Debris Waste Reduction and Recycling Requirements." (City of Redondo Beach Municipal Code §§ 5-2.701 to 5.2710.). Local regulations should be listed in Table 5.14-5 and Table 5.14.6, and the applicant should discuss the applicability of the ordinance and how the project would comply.

Response: Applicant inadvertently omitted the City's ordinance on "Construction and Demolition Debris Waste Reduction and Recycling Requirements" from Tables 5.14-5 and 5.14-6 of the AFC. Revised tables have been provided below as Tables DA5.14-1 and DA5.14-2.

The City's Construction and Demolition Debris Waste Reduction and Recycling Requirements require:

- The preparation of a Waste Management Plan (WMP),
- A performance deposit and WMP fee,
- A recycling report after construction is completed,
- The need for at least 50 percent of all construction and demolition material generated by the project to be diverted,
- The need for no more than 25 percent of the 50 percent diversion rate will be achieved through the recycling or reuse of inert materials, and
- Submittal of all receipts (weigh tags) to show compliance and obtain deposit.

It is anticipated that to comply with this requirement, the Applicant will prepare a WMP prior to construction and another prior to operation if required by the CEC as a Condition of Certification. The WMP will be submitted to the Compliance Project Manager at the CEC for review and approval. A WMP typically includes discussion of the types of waste generated at the facility, storage and disposal of the wastes, requirements for waste diversion, and requirements for transporters.

TABLE DA5.14-1
Laws, Ordinances, Regulations, and Standards for Waste Management

LORS	Requirements/Applicability	Administering Agency
Local		
Redondo Beach Municipal Code, Title 5, Chapter 2, Article 7	Construction and Demolition Debris Waste Reduction and Recycling Requirements	City of Redondo Beach Public Works Department, Solid Waste/Recycling Division

TABLE DA5.14-2
Agency Contacts for Waste Management

Issue	Agency	Contacted Agency
Nonhazardous Waste		
Construction and Demolition Debris Waste Reduction and Recycling Requirements	City of Redondo Beach, Department of Public Works, Solid Waste/Recycling Division	Jon Emerson, Sr. Management Analysis Solid Waste/Recycling Division 415 Diamond Street, Redondo Beach, CA 90277 jon.emerson@redondo.org (310) 318-0686 x4151

Reference:

Emerson, Jon / City of Redondo Beach, Department of Public Works, Solid Waste/Recycling Division. 2013. Personal communication with Beth Storelli/CH2M HILL. January 14.